The Bradshaw Lecture

ON

SIR ASTLEY COOPER AND HIS SURGICAL WORK.

Delivered at the Royal College of Surgeons of England on Dec. 7th,

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MR. PRESIDENT AND GENTLEMEN,—To Mrs. Bradshaw, who survived her husband some fourteen years, we owe the foundation of this annual lecture in honour of her husband's name. The President nominates the lecturer for the year at his discretion, and in this College the selection of a subject for the lecture, provided only a surgical one be chosen, is otherwise free from restriction. The choice is always difficult, and in making one from the field of surgery it has occurred to me that some account of the life and labours of one of the great surgeons of a bygone period and the relation of his work to the surgery of to-day might not be uninteresting. More than fifty years have passed since Sir Astley Cooper completed the allotted term of his active and honourable career. It cannot be out of place to review in this lecture theatre the life of a man who was twice President of this College, who has enriched its great museum by so many valuable and instructive specimens, and who founded the important triennial Astley Cooper prize; moreover, as a Lecturer on Surgery at St. Thomas's Hospital, and as surgeon to Guy's Hospital, his career must have a still closer interest for many here present to-day. Sir Astley Cooper was essentially an observer, and a patient recorder of what he observed. How difficult all complete observation may be is exemplified from the records of any science. In the exact sciences error can be made to correct itself, but in the study of the ever-changing conditions of animal life, both in health and disease, where so much must be left to conjecture, fallacies are prone to creep in, and despite the resources of the post-mortem room and the multitude of illustrations in our great museums the truth too often eludes our search. If this be so in the present day how great must have been the difficulties under which the surgeon of seventy or eighty years ago was fain to strive after success, and his difficulties of achievement were no less serious.

[Sir William MacCormac here pointed out at length the enormous advantages enjoyed by modern surgeons over their predecessors in the possession of anæsthetics and the recognition of antiseptic principles. He alluded to the English and foreign masters of surgery—Desault, Dieffenbach, Scarpa, Cline, and John Hunter,—to whose teaching as well as to his own genius Sir Astley Cooper owed it that without knowledge of antiseptics or facilities for the production of anæsthesia he was able to earn for himself the title of a "prince of surgery."]

The prince of surgery, as Sir Astley Cooper was fittingly named by his later contemporaries, was born in 1768. Of his boyish life we need say little, except to note that he was no pale-faced student burning the midnight oil to gain a precocious lore in the calling he was later to adorn. He was a ruddy, active lad, apt for every prank that healthy boyhood prompted, but disliking books almost as much as he disliked falsehood and meanness. His father, a clergyman of a good old school, understood his frank, generous, mischievous son when he said of him, "He is a sad rogue; but in spite of his roguery I have no doubt he will yet be a shining character," and wisely left him to accumulate that splendid capital of health and strength that made possible his marvellously successful career. There is an anecdote of him that illustrates well his carelessness of self when he could lend a helping hand to others. A village schoolboy had lost his hat in a deep pond and was crying bitterly on the brink, when there came to the spot a young gentleman, dressed in the height of the fashion of the day: a scarlet coat, a three-cornered cocked hat, a glazed black stock, nankeen small clothes and white silk stockings, his hair hanging in ringlets down his back. He, seeing the boy's grief and learning the cause, made no more ado but marched into the muddy water, rescued the hat, and handed it to its owner. This young gentleman was Master Astley Cooper returning from his dancing school. The irrepressible boy became the typical medical student of his time—an idle, rollicking ne'er-do-well. His uncle, William Cooper, then senior surgeon to Guy's Hospital, had little control over him, but with his apprenticeship to Cline he suddenly developed an ardent devotion to anatomical study that never left him. The transformation was complete and permanent, and the rest of his life is an extraordinary record of untiring industry. In 1791 he married, and in the following year went with his wife to Paris, where in the midst of the turmoil of the Revolution he found opportunities of associating himself with the great surgical masters of the French school. In the same year he began his career as a lecturer, and two years later he became Professor of Anatomy in Surgeons' Hall.

When Cooper first commenced to lecture on surgery he followed in Hunter's footsteps; but at this time he did not possess sufficient authority to lay down great principles. His mind, too, rebelled against wide generalisation and was better adapted to the close observation and practical application of facts. Warned by the desertion of his audience, he changed his methods, confining himself to the exposition of surgical pathology as illustrated by cases and to the description of operative procedures. By these means he soon recalled his pupils and shortly became the most attractive lecturer on surgery in London. These lectures formed a new departure in teaching, for previously, in accordance with school custom, anatomy and surgery were taught by one person. But with the approval of Mr. Cline and the permission of the other members of the staff of St. Thomas's and Guy's Hospitals he devoted himself after his return from Paris to developing the subject of surgery into a separate course, and his lectures upon its principles and practice proved the foundation of his subsequent fame. South tells us that the old lecture theatre at St. Thomas's Hospital was crammed when Astley Cooper lectured, and the stairs and passage were crowded with those who could not find room elsewhere. The lectures contained enormous masses of facts which their author's large opportunities for practice enabled him to collect and his powerful memory to retain, and whatever the subject under treatment he was always provided with apt illustrations from his own experience. His capacity for work was as amazing as that of John Hunter. He rose early and devoted the morning hours to dissection and the making of preparations. He had a dissecting-room over his stables, and here with aid of assistants and draughtsmen he did a vast amount of work. After this he would see patients till one o'clock, when, no matter who might be waiting, he proceeded to the hospital to give a lecture on anatomy. He then visited the wards, performed operations, and again visited patients till seven, when he dined. After dinner he gave a surgical lecture twice a week at eight, and then visited patients, often till midnight. All this time, in his carriage and elsewhere, he utilised every spare moment in noting points of interest in connexion with his cases and operations, and it was these records and those he kept of his experiments and dissections that formed the basis of his published works. His lectures were illustrated in the most lavish manner; those on comparative anatomy at this College, chiefly on the Digestive Organs of Mammals, were accompanied by elaborate preparations, drawings and dissections which, according to South's estimate, cost £1000 for the single course.

[Here Sir William Mac Cormac alluded briefly to Sir Astley Cooper's work upon the Membrana Tympani and the Thyroid Gland before more elaborately dealing with this great surgeon as the pioneer of the surgery of hernia.]

In 1804 appeared the first, and in 1807 the second, part of the "Anatomy and Surgical Treatment of Inguinal and Congenital Hernia." Few of us, I fear, have read the whole of this remarkable monograph, a work that alone would have been sufficient to establish a lasting fame, replete as it is with original observations, carefully digested, simply and clearly expressed, and traced to their practical issues with a directness that might excite the envy of the most advanced workers of our day. He found little more than a chaos of scattered facts and absurd theories where he left order and system. There are, indeed, few points in the anatomy and surgery of strangulated hernia that he has not elucidated, and he has discussed the subject with a fulness of experience that has never been excelled and with an insight that has

led him to the true significance of almost every fact that his observation had noted. His errors are few and are chiefly due to the tyranny of tradition, as where he cheerfully prescribes bleeding to syncope as an invaluable auxiliary to the surgeon in the application of taxis; but where he was free to act upon his own unbiased judgment he was rarely at fault. Are not his directions for the treatment of both inguinal and femoral hernia for the most part those still recognised, and do we not all either consciously or unconsciously repeat almost his very words in teaching our pupils to this day? "The operation for hernia," he says, "is in itself attended with little danger, and the reason it has been so frequently followed by death is by its being performed too late. It cannot be too much lamented and condemned that so much time is commonly lost. Trial after trial is made to reduce the hernia, hopes are entertained that an operation may be avoided, till the rapid progress of the symptoms points out the fatal error of the delay, and when the operation is performed it too clearly demonstrates the impossibility of success." Strange as it must appear, since surgeon after surgeon from the time of the older Hey has striven to emphasise this doctrine, these words present a true story of case after case of hernia admitted to our hospitals down to this very day. The treatment of gangrenous intestine, the result of strangulation, receives in this work considerable attention. The surgeon is recommended to divide the stricture with all care and with the least possible disturbance of the parts in the neighbourhood of the neck of the sac; for, although by so doing some separation of the adhesions may take place, it is better thus to afford free passage for the fæces and also prevent any extension of the gangrene. The operator should then freely incise the gangrenous intestine and endeavour to evacuate the contents, not only of the mortified loop of bowel, but of the canal above the stricture. Both Travers and Lawrence condemned the practice of dividing the stricture as being unnecessary and calculated to disturb the adhesions and increase the risk to life; but Cooper argues that although in some cases incision alone may be sufficient to empty the overloaded bowel, yet in others the neck of the sac is so contracted and the stricture so tight that the opening is insufficient and should be enlarged. Probably, on this point, differences of opinion still exist. But the large and deeply interesting question of restoring the continuity of the bowel under these circumstances also occurred to Sir Astley Cooper's mind. In two cases of gangrene of the bowel he employed sutures to bring the edges of the resected intestine together. In one case of femoral hernia he cut away a gangrenous loop about two inches and a half in length, and united the cut ends of the bowel with three sutures so as to leave a small opening for the discharge of fæces. In another case of femoral hernia he performed a similar operation, leaving the ends of the sutures hanging out of the external wound and the involved portion of bowel close by the wound. One patient died, the other recovered with a fæcal fistula. He tested the results—enterectomy, as we should now call it—upon dogs, but without much success, owing doubtless to the imperfect suturing of the divided ends of the bowel. In one of the experiments the method of suture employed resembled that of Czerny, in another he adopted Rambdohr's plan of invaginating the upper into the lower part of the bowel; but, as he justly says—and the lesson has to be repeated in our day,—it is difficult in a case of hernia to know which is the upper and which is the lower end, and the eversion of the mucous membrane renders the method impracticable. He contends that, although intestinal suture has occasionally proved successful in animals, the practice is inapplicable to the human subject from the uncertainty of securing a union between the divided structures; and in 1808 he finally abandoned all attempts in this direction. Nevertheless, it is, I think, clear that had Astley Cooper known how to oppose the peritoneal surfaces of the bowel by the introduction of Lembert's or some other effective form of intestinal suture he would have arrived at a different conclusion.

I may, perhaps, be here allowed to digress with the view of showing the present aspect of this most important subject, upon which Sir Astley Cooper has thrown so bright a light, and in doing so I will also venture to offer some considerations on the radical method of treating hernia drawn from my own experience. The best practice to adopt in cases of gangrenous hernia is still in dispute. Granted that the patient's general condition is such as to permit a severe operative procedure, is it better to leave the bowel uninterfered with *in situ* and subsequently perform an operation for the closure of the fistulous opening or artificial anus which will follow if the patient survives, or is it better to excise the gangrenous portion of bowel at once and to suture the cut extremities, and if this method be adopted is it desirable that the operation should be done within the area of the hernial wound, or, as Cooper suggested, with the addition of a laparotomy, by which we get increased facilities for manipulation at the cost of some additional risk to the patient? I was at first inclined to the former plan, but when I practised it I discovered that the separation of the adhesions at the second operation occasioned much delay, while in cases where the loop of gangrenous bowel is in the upper part of the small intestine there is, in addition to other drawbacks, a risk of the patient being starved; hence I should now elect in a suitable case to attempt an immediate restoration of the continuity of the bowel. In cases of inguinal hernia this may often be accomplished at the seat of the wound, but in the femoral form it cannot readily be done except after abdominal section, as there are no means of sufficiently enlarging the area of the external wound. Fortunately for the success of either operation it is no longer felt to be essential to resort to the very complicated forms of suturing which some have recommended. To read a description of these inventions is almost enough to deter anyone from attempting to carry them into practical effect. Ordinary manipulative skill will enable the operator to pass a continuous suture through the edges of the divided mucous membrane and then to introduce the number of Lembert stitches required to bring the peritoneal surfaces into adequate contact with each other. This proceeding is simple and has the inestimable advantage of being quickly accomplished. It is often better to introduce also an inner row of interrupted sutures through the everted mucous membrane after the manner of Lembert. This is the more easy as the mucous membrane always projects, and its ready involution by this method renders the subsequent row of sutures through the serous and muscular coats more secure since there can be no interposition of mucous membrane. It is scarcely necessary to refer to the importance of recollecting the absence of peritoneal covering to that portion of the gut which lies between the two layers of the mesentery to which I called attention in my oration at the Medical Society six years ago. The modern procedures have been of very slow growth and the work of many minds, and are even now still passing through the phases of transition from complexity to simplicity that every great surgical measure has had to survive. The ingenious expedient of intestinal anastomosis was not foreseen by Cooper. This, too, has gained in practicability as experience has advanced, and in the method of Halstead it has perhaps reached a stage of simplicity that leaves little to be desired. Our present position as to the results of resection of the intestine for gangrenous hernia may be gathered from the interesting collection of cases made by Mr. Kendal Franks, whose figures show that of 222 cases—inguinal, femoral, umbilical, and unspecified—the mortality was 46·8 per cent. This death-rate, however, is doubtless too small, as many fatal cases have not been recorded, while all successful ones have probably been published. It must of course be remembered that the mortality is for the most part attached to the condition for which the operation is demanded and not to the operation itself, and this being granted the figures inspire us with confidence to persevere in utilising the resources which modern methods have rendered so hopeful.

Another important advance that we have made upon the position occupied by Sir Astley Cooper is in the universal adoption in every suitable case of measures for procuring a radical cure of hernia. Sir Astley Cooper mentions that proposals had been made for cutting away the hernial sac, or tying its neck, during the operation to relieve strangulation, and in one case of femoral hernia he tried this plan, but nevertheless another hernia formed, and he concluded that the removal of the sac would not prevent a return of the disease, probably because it would not diminish the size of the aperture by which the rupture descended. The ligature of the neck of the sac, especially in inguinal hernia, he considered to be open to many objections, and especially that of exciting the much-dreaded peritonitis, the *bête noire* of the surgeon of the past. Sir William Lawrence, too, in his work on Rupture emphatically condemned any operation for attempting a cure in cases of reducible hernia, "as the patient's life is thereby endangered to rid him of an inconvenience and the operation affords no greater prospect of

entire recovery than he had without it." There is little doubt that the opinions of Cooper and Lawrence were to some extent justified by the conditions that prevailed in their day, but with the modern open operation under antiseptic precautions the danger has become almost nominal, the security against return is enormously enhanced, and surgeons all over the world are striving in one way or another to perfect the technique of the procedure and to improve still further the good results already attained. To give examples of the number of instances in which during the past few years an attempt has been made to effect a cure in cases of non-strangulated or reducible hernia, I may mention that the whole number of operations performed in cases of this kind by myself amounts to—inguinal 80, femoral 6, umbilical 3, and ventral 1; and I am fortunately able to say that in no instance was a fatal result directly attributable to the operation. There were two deaths, one from broncho-pneumonia in a child of two years and one from cerebral embolism in a woman of fifty years. I need not enter into the details of the operation I perform. The essential feature of every operation is to seal or remove the peritoneal pouch up to the level of the internal abdominal ring and to ensure the absence of any pouching in this situation; beyond this there are various methods, multiplying yearly, for the so-called closure of the inguinal canal—a closure, by the way, that can never be complete so long as the passage transmits the spermatic cord. It has seemed, however, to me to be of much advantage to strengthen the abdominal wall over the whole length of the inguinal canal, and for a short distance above it, by a series of deep sutures. The method of passing the sutures tends to remove the somewhat flaccid condition of abdomen common in persons who are the subjects of acquired hernia and materially increases the power of resistance of the tissues at the internal ring where the hernia is so apt to reappear, and for months afterwards a broad, hard resisting bar may be felt occupying the line of the canal, while the closure appears to be as solid and complete as is possible, or as it is in Bassini's or any other of the more complicated procedures. In cases of congenital hernia the lower portion of the sac is cut off and left to form a tunica vaginalis for the testis. Not uncommonly an incompletely descended testis is associated with this form of hernia. It is usually undeveloped, and if lying in the inguinal canal may be removed with advantage. I have had occasion to do this in two or three instances; otherwise it may be pushed back into the abdomen. On the removal of the dressings, which are usually left untouched for a week, the wound is generally found to be united by first intention; the sutures are then taken out and a light dressing applied. After three weeks the patient can sit in a chair and is soon afterwards discharged with the injunction to avoid any severe straining effort for four more weeks. I have not, except in a very few instances, ordered a truss. I think silk is the best for the buried sutures; other surgeons adopt by preference a different material. Bull uses kangaroo tendon, and he applies a light plaster-of-Paris splint from the level of the umbilicus to the ankle to keep the parts at rest and further the healing process. In their paper Bull and Coley mention 40 cases, varying in age from eight months to fourteen years, where this plan had been used. All recovered from the operation; in 38 of the 40 cases absolute primary union was secured and in nearly all the children were up and about the ward in from two to three weeks.

With regard to the risk of life it must be held to be very small. Champonnière, of the St. Louis Hospital, for instance, has operated on 376 cases of non-strangulated hernia with but two deaths—one from pulmonary congestion and one from internal strangulation; and he mentions in a letter sent to me a few months since that at that time he had operated in 120 cases in succession without a death. In Lariboisiere, also, Berger had operated up to November, 1891, on 50 cases without a death, and since then in 78 cases of inguinal hernia with one death; in this instance the hernia was the size of an adult head, with many adhesions, and death was due to intestinal obstruction. He notes, amongst interesting complications, that in one case intra-peritoneal hæmorrhage occurred from the omentum—it was recognised in time and the bleeding points secured; in two cases the bladder was cut into, and twice the vas deferens was ruptured. The femoral vein was also once wounded in an operation for femoral hernia, but these accidents were not attended by any serious consequences. Bassini has operated in 262 cases with one death. Schede records 72 cases he had operated upon, all of which were successful. Of Kocher's 106 cases, in which 119 operations were performed, one died fifteen days afterwards from embolic infarcts in the lungs. There was no peritonitis, the wound was quite healed, and the cause of death appeared to be unconnected with the operation. Eighteen were cases of double hernia; the youngest patient was nine months, the oldest seventy-one years. Other surgeons have been less fortunate. Billroth in 51 operations lost three patients, Czerny a larger proportion. Wolter calculates the mortality at 4 per cent., while Leisrink in 202 operations finds a death-rate of 7·4 per cent., Anderegg 3·6, and Adler 3·5. There is, however, evidence of increasing improvement in the details of the operative procedure, and if every precaution be taken there is no adequate reason why it should not be equally successful in the hands of all and the mortality reduced practically to nothing. Interesting in a special way as well as on general grounds is the duration of treatment and the manner in which the wound unites. In my own cases upwards of 80 per cent. have healed immediately, and the average duration of the treatment was a little over one month. Kocher states that 89 per cent. of his cases healed by first intention, which he ascribes entirely to careful antisepsis, and he permits his patients to return to work in a little over a week. Wolf, in the Augusta Hospital in Berlin, obtained immediate union in 70 per cent. of the cases, while Billroth secured an immediate healing in only 39 per cent.

The after-results of such an operation are the tests of its merit, and where hospital patients are concerned they are difficult to obtain. During the summer, for the purpose of illustrating a clinical lecture on the subject, I was able to present eighteen quite unselected cases to the class. They varied in age from ten to fifty-five years, and the interval which had elapsed from the operation varied from a few weeks to nearly three years. Nevertheless, fifteen of these were in a thoroughly satisfactory state and showed no sign of any relapse; three who had worn strong trusses exhibited a general weakness of the part but no actual protrusion.[1] In my private cases most satisfactory results were also realised. Many of the patients have been under observation for years, and several have entered as cadets at Sandhurst, where they

ANALYSIS OF THE RESULTS OF THE OPERATION FOR THE RADICAL CURE OF NINETY CASES OF NON-STRANGULATED HERNIA.

—	Number of cases operated upon.	Noted as having healed by first intention.	Cases which suppurated.	Average duration in hospital after operation.	Cases known to have worn no truss since the operation.	Wearing a truss now.	Relapses.	Deaths.
Inguinal	80	56 (80 %)	14 (20 %)	32 days.	39	7	4	One from acute broncho-pneumonia in a child of two years three days after the operation.
Femoral	6	5 (83 %)	1 (17 %)	32·5 days.	2	2	—	—
Umbilical ..	3, and 1 ventral.	2	—	17 days.	—	—	—	One from cerebral embolism due to detachment of vegetations on the aortic valve in a woman of fifty years thirty-six hours after the operation.

[1] Clinical Journal, March, 1893.

had to undergo the very severe strain which military rough-riding and the gymnasium entail In none of these have I heard of any relapse. The foregoing table states the results of a large number of operations. In respect of the final result I can only trace four cases of relapse in my total of 90 operations; 43 were ascertained to be without any return, and in 28 of these the interval varied from two to six years. In 112 of Championnière's cases which he was able to keep under observation 30 had gone for two years without relapse and in 11 others the cicatrices were solid after four years and longer. Kocher obtained the final results in 94 of his cases and found 80·8 per cent were cured, while 19·2 per cent. had relapsed. In most of these an interval of two years had elapsed, and after this the probability of subsequent relapse does not exceed 2 per cent.; 19 per cent. of the relapsed cases were of inguinal hernia, while 33 per cent. were femoral. Berger has seen 2 cases of relapse in patients he operated upon before 1891, and some of these date from two to four years, while others were of shorter duration. Not one of his cases operated upon since 1891 presents any sign of recurrence. The operation he employs is a modification of Bassini's: 239 patients in whom 247 operations were performed by Bassini were traced. In 47 no relapse had occurred after two years and 108 had no recurrence after periods varying from one year to four and a half years Schede states he found the percentage of relapses in all his cases to be 10; 2 of these were finally cured after a second operation and four wore a truss. In Bull and Coley's cases, which were closely watched only 2 relapses took place. These were ascribed to faulty operation, as the wounds suppurated and the sutures employed sloughed out. Bull estimates the proportion of relapses as only 1 in 50 cases. The older collection made by Andersen shows 50 per cent. of relapses, Socin 39 per cent, Wolter 25·9 per cent, Svenson 21 per cent, and Leisrink 20 per cent., which are much less favourable than the results previously quoted. I think that recent statistics go far to show that the mortality after the operation for the radical cure of hernia is practically nothing, that the wound heals quickly and well, and that probably a shorter duration of after-treatment than that usually considered necessary may be sufficient: and they also prove that a very large proportion of the persons operated upon are cured.

As regards the indications for the operation differences of opinion prevail. It appears to me to be called for in nearly all otherwise healthy individuals in whom the hernia is wholly or partially irreducible, where it is imperfectly retained by a truss, or where the hernia is large or a source of much inconvenience. In boys and young men, in whom the hernia is almost always of the congenital form, the operation is strongly indicated. It spares them the prolonged use of a truss, which is so little likely to cure them, and it fits them for the active occupations of life. Although youth points strongly to the desirability of the operation, yet under otherwise favourable conditions it may be properly undertaken up to late adult life. Many consider that the operation should not be performed in quite young children or infants on account of the difficulty of maintaining aseptic conditions and the possibility of cure by a truss; but Bull, Kocher, Schede, Rushton Parker, and others have obtained the best possible results in children, and even in infants from the age of a year, or even less, upwards. Certainly I should consider the operation to be indicated in childhood if the hernia cannot be effectively restrained by a truss. Of course the presence of organic disease or general ill-health contraindicates the performance of this, as it would that of any other not absolutely necessary operation. Success depends on the method employed, the essentials being the complete removal of the sac, a sufficient closure of the canal by buried sutures, and the rapid healing of the wound without suppuration. The comparative smallness of the hernial orifice, the limited bulk of the rupture, as also its being single, enhance the prospects of cure. Probably an insufficiently high ligature of the sac, which would leave a potential sac for the formation of a new hernia, is the chief causal element of relapse as well as the occurrence of suppuration, especially in connexion with the deep sutures. Cases of hernia of great size with a wide neck and cases of double or multiple hernia frequently relapse. It would be difficult, I think, to point to any larger or more successful extension of the range of operative surgery as applied to a single form of disease than this one, and the propriety of the operation, if there be any who still contest it, has, I submit, been abundantly justified by its incontestable benefits and insignificant rate of mortality. If I seem to have unduly dwelt upon this important subject I would crave the indulgence of my hearers, and will now revert to the labours of the great surgeon who is my theme.

Cooper's experiments upon the ligature of arteries, and the nature and extent of the collateral circulation which is afterwards established, were of far-reaching importance. In the museum at St. Thomas's Hospital there are preparations showing the effects of ligature of one and both carotids in dogs, which are alleged to have shown no alteration either of habit or disposition as a consequence. To the courtesy of the authorities at Guy's Hospital I owe the privilege of showing this example of the successful ligature of the aorta in a dog, upon the strength of which Sir Astley Cooper afterwards attempted to secure a similar result in man. He was the first to demonstrate the practicability and safety of tying the common carotid artery, and thus indicated the means whereby an otherwise certainly fatal condition might be cured or relieved. When describing the operation he mentions having applied two ligatures to the vessel half an inch apart, and as that was the largest interval to which they could be separated he judged it better not to divide the vessel between, as he had apparently otherwise intended to do, and which he did do in the second, and successful, case—a practice which has recently been somewhat extensively revived. In 1817, when the abdominal aorta was tied by Sir Astley Cooper for the first time, his enterprise left very far behind every kind of surgical operation which had previously been attempted, and, as Malgaigne says, it might pass for one of the pillars of Hercules in operative surgery. The circumstances of the case afford a good illustration of his readiness to cope with a sudden emergency. An aneurysm of the external iliac artery, which was rapidly increasing in size, had been treated ineffectually by pressure and other means; sloughing occurred, hæmorrhage succeeded, and death seemed inevitable. The sac was then laid open and the artery sought for in vain amidst a chaos of broken-down coagula. Under these circumstances Cooper determined to tie the abdominal aorta. He made an incision in the linea alba of three inches in length, opened the peritoneal cavity, scratched through the peritoneal investment of the artery, and with an aneurysm needle passed a ligature round it. The patient was nearly moribund at the time of the operation, and succumbed next day, forty hours after the operation. After death the vessel was found to be tied three-quarters of an inch above the bifurcation, and was filled with clot an inch long both above and below the ligature. It strikes us in examining the common iliac artery above the aneurysm that this vessel would have borne a ligature, but it is useless now to speculate as to Sir Astley Cooper's reasons for tying the main trunk. It is interesting to remember that the most recent operations for ligaturing the great arteries in the abdomen—although practised under very altered conditions—are performed, like that of Sir Astley Cooper, through the abdominal cavity.

[Sir William MacCormac then detailed the work of Sir Astley Cooper upon Dislocations and Fractures, upon Diseases of the Breast, upon Diseases of the Testicles, and upon the Urethra. He mentioned also his indefatigable energy as a collector of anatomical and pathological specimens, quoting Sir James Paget to the effect that he deserved the honour of having been one of the very few who, in the beginning and early part of this century, promoted the science of pathology by the study of morbid anatomy, and concluded as follows:]

It is not difficult to construct a mental picture of Sir Astley Cooper from the records that his contemporaries have handed down to us. I have already spoken of his boyhood, and have shown how the spirited but idle scapegrace became one of the most determined and successful workers of his day. We may now recall him as he was in his prime—a stately presence, tall and well-proportioned in figure, broad of chest and broad of brow, with bright complexion, clear candid eyes, and a refined and gentle but firmly cut mouth. It was so that Lawrence saw and painted him, and his character in nowise belied the promise of his form and features. A man of quick perception, accurate in observation, ready of resource, and untiring in effort. All of these faculties were abundantly attested by his professional life and won him success, but he had other qualities that endeared him to all who came within his sphere of influence: a free-handed generosity, a cheery humour, and an unswerving sense of truth and honour. Temperate without asceticism, a good listener and a good talker, he was the best of companions. Of his kindliness there are many stories. Let a friend in distress beg of him a loan and he does what we should expect of the man who when a lad had walked into

the muddy pond, all in his finest army, to dry the tears of a capless schoolboy—he sends a draft for ten times the amount asked, to be repaid or not according to the convenience of the borrower. And when the poor struggling man or woman came to his consulting-room sadly needing his skill and yet ill able to spare the golden guinea that was to pay for it, for such a one, we are told, were reserved his gentlest courtesy and kindliest interest in order that no feelings might be wounded when he declined the proffered fee. Such was Sir Astley Cooper, one of the greatest masters in a noble calling, and a true-hearted gentleman in all his thoughts and actions. We are proud to remember that he belonged to us. When he was appointed Sergeant-Surgeon to the King he was about fifty-six. The life of no surgeon had been more happy or more filled with good work. He was honoured by men of every rank among his contemporaries, was successful beyond all rivals in the practice of his profession, and beloved almost to worship by his friends; but his health had begun to suffer. For a time he gave up practice and retired to the country, but he could not settle to the life of a country gentleman. His energies becoming in part restored, he returned to active professional work in 1828, and published in succession during the next four years his works on "The Diseases of the Breast," "The Diseases of the Testicle," and "The Anatomy of the Urethra," and his last completed work was "The Anatomy of the Breast," published in 1839, two years before his death. Up to the last he was engaged in physiological and anatomical inquiries. He was indefatigable in the search after knowledge and the accumulation of fresh facts and new experience, and although he became more and more ailing, he continued to do what work he was able, saying that he would die in harness. He viewed death like a philosopher, neither wishing nor fearing it. Some time before his last illness a false report arose that he had been struck with apoplexy, and in reply to an anxious letter from his nephew, Bransby, he placidly announced that he had had no fit except a fit of hunger, and that he had been subject to fits of this kind at short intervals all his life. That he was prepared, however, was proved by his will, which enjoined that his remains should be subjected to necropsy, and pointed out the directions in which investigations were to be made to explain symptoms he had noticed during life. The end came when he had reached the age of seventy-three. A few minutes before he passed away, he said to the friends who surrounded him, "God bless you, and good-bye to you all." They were his last words. He was buried with befitting ceremony in the chapel at Guy's Hospital. The statue to his memory in St. Paul's Cathedral, the still finer presentment at Guy's Hospital, and the beautiful portrait by Sir Thomas Lawrence, which adorns our College walls, preserve for us the semblance of his outward form and features. What he did for the advancement of the science to which his life was dedicated cannot be more tersely summed up than in the words of Brodie: "His published works," he writes, "will remain as long as surgery is cultivated, filled, as they are, with important facts, and containing the clearest rules of diagnosis. They will transmit his name to posterity with those of Sydenham and Hunter as a benefactor to the human race."

Few more than Cooper have so abundantly discharged the debt which every man is said to owe to his profession, and if we would realise what we owe to him we have but to compare the condition of surgery as he found it and as he left it. He belongs to that goodly company—

> "The choir invisible of those immortal dead,
> That watched to ease the burden of the world,
> Laboriously tracing what must be,
> And what may yet be better."

My task, Mr. President and Gentlemen, is ended, and I have only now to express my wish that this Bradshaw Lecture, to which you have so kindly and courteously listened, had been more worthy of its subject and of this place and audience.

PROPOSED FEVER HOSPITAL AT UPPER NORWOOD.—The Local Government Board have refused to sanction the proposal of the Metropolitan Asylums Board to purchase the Grangewood Estate at Upper Norwood for the purposes of a fever hospital. It will be remembered, as we have already noted in THE LANCET, that the proposal was strenuously opposed by the corporation of Croydon, the Crystal Palace Company, the London and Brighton Railway Company, and the leading residents and tradesmen of the district.

The Bradshaw Lecture

ON

SOME DISEASES OF THE THYROID GLAND.

BY W. S. GREENFIELD, M.D., F.R.C.P. LOND., M.R.C.S. ENG.,

PROFESSOR OF GENERAL PATHOLOGY AND CLINICAL MEDICINE, UNIVERSITY OF EDINBURGH.

Delivered before the Royal College of Physicians of London on Nov. 30th (owing to the unavoidable absence of Professor Greenfield through illness) by Dr. SIMS WOODHEAD *in the theatre of the Examination Hall, Victoria Embankment.*

MR. PRO-PRESIDENT, FELLOWS, AND GENTLEMEN,—We meet to-day under the shadow of a great loss, personal to all of us, but especially to those most indebted to the kindness of our late President. How much kind encouragement did he give and how much trouble to himself did he take to facilitate my convenience in connexion with the delivery of this lecture; yet it was but one of the constant instances of his disregard of self which, with his other great qualities, will keep the memory of Andrew Clark ever fresh among us.

In selecting my subject—that of some diseases of the thyroid gland—I was influenced by the fact that I had in hand a large amount of material, mainly from myxœdema, and I thought that by its aid I might discuss some of the more difficult problems of thyroid pathology; and, whilst I might be able to contribute but little that was new, yet even the demonstration of some facts might aid to throw some new light on disputed points. There seemed, too, to be a peculiar fitness in doing so within this College, where we may well glory in the fact that to the long roll of Fellows who have made primary and epoch-making discoveries the name of Gull, and still more that of Ord, must be added in relation to myxœdema.

Hitherto a great part of the attention of pathologists has been directed to the consequences of removal, atrophy, and other forms of athyrea. The experiments of Schiff, Kocher, Victor Horsley, and others have attracted especial attention to this side of the question, and many, if not most, of the ideas of the function and pathology of the gland have been drawn from the results of its removal. On the other hand, the work in relation to the action of the separated thyroid secretion, concerning which Dr. Murray of Newcastle must in this country be regarded as the pioneer, has led to doubts of the accuracy of some of the conclusions drawn from athyrea alone. Even with regard to myxœdema, which I had intended at first to make the subject of my lecture, the result of very numerous observations on that disease had led me to doubt whether its commonly accepted intimate pathology was accurate. From these studies on myxœdema alone I thought that some new lessons might be drawn as to the physiology of the thyroid gland; and from a comparative study of thyroid pathology several of the doctrines hitherto maintained, such as the importance of "colloid" in the body, the idea of special mucin-metabolism within the gland, the importance of the thyroid gland as a blood-forming organ &c.—doctrines which have obscured much research and may be seriously questioned,—might with advantage be dealt with But, however important these points may be, they cover only a small part of thyroid pathology; for what is especially called for is the comparative study of exaggerated function, or of perverted function, of the gland. Of no organ can we learn the precise function by its absence alone. Such a contrasted condition has long appeared to me to be afforded by exophthalmic goitre, and since very few appear to have studied the disease from this point of view it seemed to be all the more incumbent on me to bring forward such facts as I had and to challenge attention to the subject.

EXOPHTHALMIC GOITRE, GRAVES' DISEASE, OR BASEDOW'S DISEASE IN THE LIGHT OF A PROBABLE DISEASE OF THE THYROID GLAND.

If it could be shown that this disease is one primarily dependent on the thyroid gland, still more if we could determine precisely what, if any, part of the symptom-complex is

dependent on change in its secretion, a great advance in thyroid physiology and pathology would be made. It is a remarkable fact that, in spite of the enlargement of the thyroid gland, and of the striking contrast between many of the symptoms of this disease and myxœdema, very few authorities suggest that the disease may be a thyroid one, and hardly one supports that view. A brief reference to some of the most recent works of leading authorities, such as my friends Drs. Bristowe,[1] Gowers,[2] Grainger Stewart,[3] and Osler, will demonstrate this. The only authority of note who has expressed views in accordance with my own is Dr. Byrom Bramwell, and his views appear to be entirely based on the clinical contrast.

On the other hand, several foreign observers have taken the opposite view, and consider that the thyroid change is the primary factor. Of these may be especially named Th. Wette,[4] Moebius,[5] J. Renaut,[6] A. Joffroy[7] and Ch. Achard.[8] The explanations given of the nature of the relation differ, but upon the whole that adopted by Wette seems to be the most rational and is the most ably supported.

Enough has been said to show that as yet the view that Graves' disease is probably a primary affection of the thyroid gland is not generally accepted. In speaking of it as a disease of this gland I do not wish to exclude a nervous causation; for as yet we know but little of the ultimate cause of many diseases. It may well be that the ultimate cause of some cases of myxœdema is nervous.[9] Indeed, in some cases evidence of the same kind may be adduced for its nervous origin as that accepted for exophthalmic goitre. All that I mean is to suggest that it is through the medium of the thyroid changes that the symptoms may be produced—that what athyrea is to myxœdema, that hyperthyrea or dysthyrea may be to exophthalmic goitre.

It may be right for me to say that the views which I am about to state are not the result of any hasty inference, or of a change of opinion in consequence of recent observations. For several years I had made a careful study of Graves' disease, both clinically and, as far as opportunity offered, anatomically. The observations of Dr. Ord on myxœdema, and the opportunities I had of studying that disease at St. Thomas's Hospital, suggested to me the striking contrast afforded by the two diseases, and made me determine to investigate the subject as soon as I had the material. More especially did it appear to me that the actual condition of the thyroid gland in Graves's disease had not received due attention: that the alleged changes found in published cases were conflicting: and that few or none agreed with my own observations. But it was not till March, 1883, that I had a fatal case in which I could study fully all the organs, and not only the sympathetic nervous system, to which I had previously been specially attracted. The result of examination of that case, from which many of the specimens shown to-day are taken, was to convince me that the changes in the thyroid gland were of primary importance, and to lead me to the views which, with but little modification, I now hold. And since that time I have constantly, both in clinical and pathological teaching, pointed out the striking contrast in the symptoms and pathological condition in myxœdema and Graves' disease, and demonstrated the changes found in this and succeeding cases, each of which tended to confirm my previous observations. The progress of research on the thyroid gland has served to confirm the impressions I had formed. I trust that this personal reference may be pardoned. It is partly necessitated by the fact that it was not until I had prepared a large part of this lecture—in fact, only within the past few weeks—that I have had either the time or opportunity for looking at the more recent literature of the subject, and finding that others have, by a like course of observations, come to somewhat similar conclusions. And here I may once for all express my deep regret that, owing to want of time, it has not been possible for me to pay any proper attention to the literature of the subject, especially the more recent.

Nature of the Evidence in favour of the view that Graves' Disease is due to Changes in the Thyroid.

I propose to inquire what evidence there is in favour of the view that Graves' disease is primarily a disease of the thyroid gland. In order the more conveniently to draw attention to those points of which we already possess evidence, or on which further evidence is needed, they may be classified under the following heads:—1. The condition of the thyroid gland and the changes in its structure and secretion. 2. The relief afforded by removal, partial or entire, of the gland in this disease. 3. The presence of changes in the nervous system, slight in degree, but widespread, especially affecting those centres or nerves which appear to be implicated in the disease. 4. The possibly toxic nature of these changes from their analogy to those produced by animal poisons. 5. The contrast in many of the leading conditions of myxœdema and Graves' disease, these including both symptoms and anatomical changes. 6. The correspondence in some important respects of the phenomena of Graves' disease with those produced by the artificial introduction of thyroid secretion.

Changes in the Thyroid Gland in Graves' Disease.

Of all the remarkable facts in connexion with the history of this disease the most striking is the apparent neglect of the direct study of the changes in the structure of the thyroid gland itself. Changes are indeed described by various writers, but for some years at least there appears to have been little or no application of our improved methods to the study. In many most valuable papers, even in the most recent, either no mention whatever is made of the nature of the changes visible to the naked eye or with the microscope, or they are disregarded and the disease is attributed to the nervous system. It may be that I have overlooked some important paper; but as I have been seeking evidence for several years, and have been constantly disappointed, and as careful writers repeat the same statements as to the nature of the changes, I cannot think that those I have observed are generally recognised. And whilst the material at my disposal is of limited extent, being derived from only six fatal cases, yet the constancy in the general character of the changes and their total deviation from those usually alleged to exist make me regard the observations as of more importance than their number would otherwise warrant. That so striking a change in so prominent an organ should escape thorough investigation at a period when histology has been so diligently applied to every available region seems to be almost incredible. To what has this apparent neglect been due? Mainly, I suppose, to the predominance of symptoms referable to the nervous system, with the consequent view that it was there alone that any special lesions must be found.

Views of pathologists.—Many leading pathologists, and also surgeons, consider that any kind of thyroid enlargement, if of sufficient size, may be associated with Graves' disease, in its complete or incomplete (fruste) form. Some, though very few, regard the presence of any change in the thyroid

[1] Lecture on Nervous Diseases.

[2] Dr. Gowers, in the latest edition of "Diseases of the Nervous System" (July, 1893, vol. ii.), states that "the proper tissue of the gland is increased in quantity, without being materially altered either in naked eye or microscopical appearance. Occasionally, however, there is a greater change, either cystic or 'colloid' degeneration." He refers also to the view that the "increase in the proper tissue of the organ may possibly be a result of increased blood-supply to the organ" (loc. cit., p. 886). In various other parts of the article he indicates a belief that the most important factor of the disease is a nervous one, the site of the chief activity being in the central nervous system, probably in the pons and medulla especially. From the statement that the thyroid gland usually enlarges after the cardiac symptoms have existed for some time (p. 875), and that enlargement is often only trifling in degree, and is occasionally absent altogether, one may conclude that he regards the change in the thyroid gland as a purely secondary and unimportant factor.

[3] Drs. Grainger Stewart and Gibson (Clinical Notes on Graves' Disease, p. 216, in the Edinburgh Hospital Reports, 1893) say: "We can have no hesitation in referring it to a morbid state of the nervous system." Dr. Osler, also one of the ablest pathologists and clinicians, in his "Principles and Practice of Medicine" (1892, p. 712) defines it as "a disease of unknown origin, characterised by exophthalmos, enlargement of the thyroid, and functional disturbance of the nervous system." And he further says, under the head of morbid anatomy and pathology, that it is difficult on any theory to explain all the symptoms of the disease and to bring into line the various phenomena. He only mentions under this head the changes to be found in the nervous system, and does not even refer to the changes in the gland. [4] Archiv für Klinische Chirurgie, 1892, pp. 652 and 785.

[5] The latest and most complete paper is in the Deutsche Zeitschrift für Nervenheilkunde, 1891, Band i., p. 400.

[6] Thèse de Bertoye (Lyons, 1888), quoted by [7] Joffroy and Achard. I regret that I have not been able to find the original paper.

[8] Archives de Médecine Expérimentale 1893, p. 404, and A. Joffroy also in the Union Médicale, 1892, p. 647. In the first-named paper the existence of a slight diffuse sclerosis is said to support the view that Basedow's disease is an affection of the thyroid gland.

[9] I find that Dr. Hughlings Jackson in his philosophical and suggestive Bowman Lecture (Journal of the Ophthalmological Society, vol. vi., p. 20) has made a similar suggestion as regards myxœdema and Graves' disease; but he also speaks of the thyroid condition in the latter as an "engorgement" which may be due to "atrophy of some part of the vaso-motor centre."

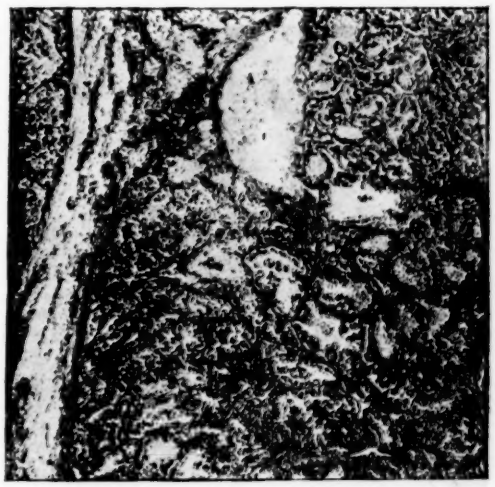
gland as inconstant.[9] The majority hold the view that it is associated with and consequent on active hyperæmia and dilatation. Thus, Ziegler[10] speaks of the chronic enlargement of the thyroid gland "which occurs as a symptom of that peculiar neurosis of the vessels described as Basedow's disease" as a condition due to congestive hyperæmia. And he adds that it is in accordance with the view that the excessive blood-supply is the cause of the overgrowth that there is an abundant vascularisation to be found in the growing gland tissue.[11] Taken in a certain sense, but not in that evidently intended, it is no doubt true that a proliferation of bloodvessels does occur, as in all active hyperplasia of glands, as also of other parts; but, so far from this vascularity being excessive, it has not been specially prominent in any case I have seen. In one case there was very slight vascularity towards the surface of the lower lobe.

Before leaving this subject, it may be well to state that I have long sought for a case, accompanied by post-mortem and microscopical examination, in which Graves' disease was present without any change in the thyroid gland. Not size but structure is by far the most important. Enlargements of the thyroid gland, even when pronounced, may be detected only with difficulty during life.[9] In a recent case of Graves' disease I had at first considerable difficulty in detecting the thyroid gland, although the symptoms were very pronounced.

Changes in the Thyroid Gland observed in Six Cases.

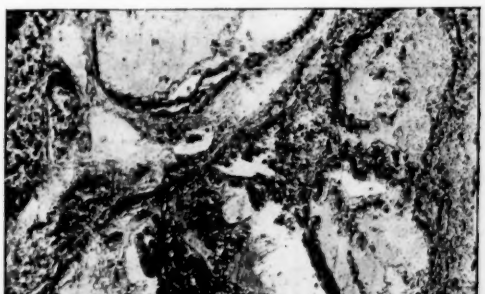
It is not my intention to describe fully either the naked-eye or microscopic changes found in the gland in the six cases mentioned, as they will be so fully demonstrated by the microscope and by photographs. The naked-eye changes presented slight differences only to be given by detailed description. In some cases examined the enlargement was very great, in others moderate. The chief features in common were the comparative uniformity of the cut surface, its paler colour, and the loss of the peculiar glistening appearance usually associated with colloid material. In two cases the resemblance to a section of the salivary gland was very striking. In no case did any special vascularity appear, except in the large superficial veins and in more superficial layers of the gland at some parts. Cysts were comparatively scanty and small, containing usually clear fluid in a thin-walled sac. In addition to the demonstration I shall now only give a brief general account of the microscopic changes, especially in their salient points of difference from other thyroid enlargements. It may be noted that, just as in myxœdema, the change, though general through the gland, is not equally distributed or at an equally advanced stage everywhere. Hence, for a full investigation of any case several parts should be examined. But what is important is the fact that the change is not a localised but a general one, corresponding with a more or less general uniformity of enlargement of the gland; that in its characters the process corresponds so closely with that to be seen in glands undergoing evolution for increased function that it must have a profound effect both on the quality and quantity of the secretion. The more striking microscopic changes in the thyroid gland are two, closely allied in nature, and usually existing in an especially marked manner in different parts of the same gland. That which appears to be a common early change is an alteration in the character of the epithelium lining the spaces from a cubical to a columnar type. This change is associated with greatly increased proliferation of tubules and epithelium, similar to that to be seen in adenomas, so that papillary projections into the spaces are common in some cases. In addition, there appears to be active secretion,[12] and absorption of the colloid material, which is replaced by a more mucinous fluid. Desquamation of the altered epithelium is also common, the masses of columnar cells lying free in the space, which may be dilated. It is observed that the glandular character and arrangement are not lost. With this there may often be seen elongated duct-like spaces, which suggest the idea that there may be persistent ducts in the gland. The second change is the production of an enormous number of newly formed tubular spaces, lined by a single layer of cubical epithelium. In their structure, and the regular arrangement of their epithelium, they exactly correspond to the tubules of a secreting gland—e.g., the sweat

FIG. 1.



Thyroid, exophthalmic goitre, Case 1. Showing great proliferation and formation of new gland spaces. × 80 diameters.

FIG. 2.



Thyroid, exophthalmic goitre, Case 2. Showing a part where the newly formed spaces are larger. There is great proliferation of epithelium and a tendency to the formation of papillary ingrowths. × 80 diameters.

[9] It is exceedingly difficult to determine the actual size of the thyroid gland from examination during life. This is partly owing to the variations in shape and size of the normal gland, and to its situation in relation to other structures. Thus in myxœdema, in cases where it appeared to be almost entirely gone, it has proved after death to be reduced to only one-half of the normal bulk. On the other hand, in some cases of enlargement inspection has shown it to be far larger than was supposed. The backward direction in some cases, the deep extent below the manubrium sterni in others, have aided the error. Of actual facts may be mentioned the case of Joffroy and Achard, in a woman aged forty-nine years, in which there was no apparent swelling in the neck, but the thyroid gland weighed 46 grammes. The disease had lasted nearly six years. I had a fatal case of phthisis in a lad aged eighteen years a few days ago, where there was found after death a cystic enlargement of the lower part of the right lobe, of ovoid shape, measuring 1½ in. in diameter. The largest cyst contained 6 drachms of fluid, but no enlargement had been detected during life, and at the necropsy it was found that the enlarged portion lay behind and was concealed by the sterno-clavicular articulation.

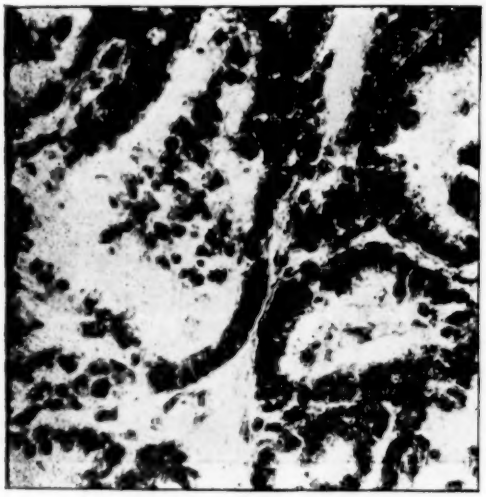
[10] Text-book of Pathological Anatomy, sixth edition, p. 723.

[11] Birch-Hirschfeld also says: "Die Anschwellung der Schilddrüse bei der Basedow'schen Krankheit beruht wesentlich auf Erweiterung der Gefässe." Third edition, 1887, p. 395.

Dr. Murray (THE LANCET, Nov. 11th, 1893) has been misled by an erroneous and unauthorised report. What I stated was that there was an enormous diminution of the colloid material. I regret that Dr Murray's paper appeared too late for me to say more of it, but it contains valuable suggestions.

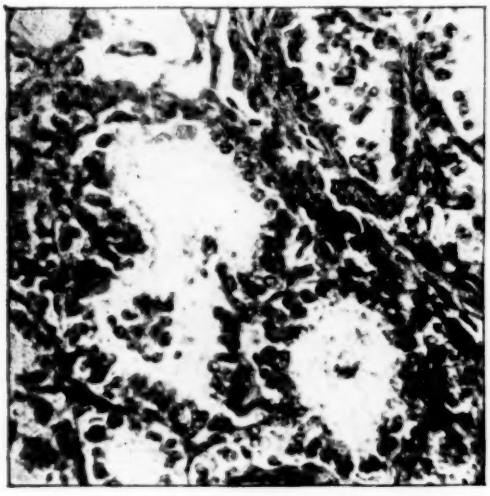
glands. Both of these changes exactly correspond with such as may be seen in a gland in active evolution, and, if we except the development of an adenoma, have no other pathological equivalent. Associated with these changes we usually find no increase, but rather a diminution, in vascularity, although there can be little doubt that the proliferation of the tubules is associated with a corresponding

FIG. 3.



Thyroid, Case 2. Showing the characters of the epithelium lining spaces under a higher power. × 335 diameters.

FIG. 4.

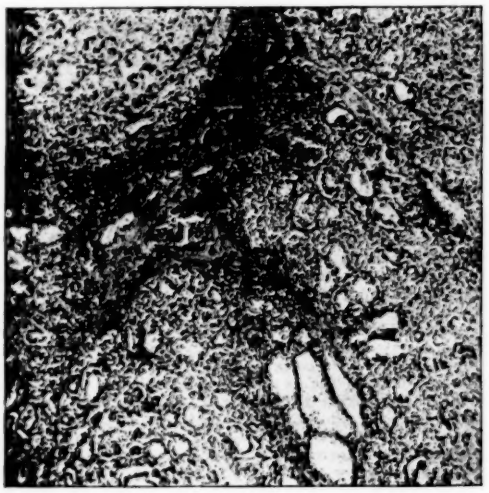


Thyroid, Case 1. Showing characters of epithelium under higher power. × 335 diameters.

evolution of capillaries. In one advanced case there was some persistent vascularity in the trabeculæ. A comparison of these changes with those to be found in the development of adenomatous growths in the thyroid gland reveals striking differences. The change in Graves' disease is a general one, not localised and spreading in a tumour-like manner. Moreover, in Graves' disease the regular mode of evolution, and the absence of the irregular growth, and of filling of the tubes with cells of irregular size and shape, are distinctive. I do not say that some adenomas of the thyroid gland may not show a similar structure, but I have been unable to find them in the cases I have examined. As a sequel of these proliferative changes we may find catarrh. This is sometimes prominent in advanced cases. The epithelium desquamates, undergoes cloudy swelling, and here and there may fill the tubules. This is especially to be seen where death has occurred with high temperature.

From the study of cases of long duration it appears that this proliferative change is liable to be followed by fibrous overgrowth. At first there is little sign of this. The fibrous septa, which are little prominent in normal conditions, may show some thickening at a comparatively early date; but within the lobules no such change is to be seen. In advanced cases the fibrous overgrowth, starting from the septa, invades the glandular structure, and in parts completely obliterates it. The lining epithelium undergoes atrophic changes similar to those to be seen in all interstitial overgrowth in glands. It becomes small, separates from the subjacent tissues, and then disappears entirely. It is obvious that both this change and the thickening often seen in the trabeculæ at an earlier stage correspond with the occurrence of chronic interstitial inflammation or fibrosis following long-continued irritation, &c., elsewhere, and since this

FIG. 5.



Thyroid, exophthalmic goitre, Case 3. Here the proliferation of duct-like spaces of small size is especially marked. × 80 diameters.

change must lead to functional inactivity the occurrence of myxœdema consequent on Graves' disease might be expected. That it does not occur more frequently is probably due to the large degree of involutionary change which may occur without leaving serious damage.

Now it is true that we could not from the study of this condition alone determine the effect on function. If we regarded the change as catarrhal we should anticipate alteration in the secretion, perhaps with excess in quantity, almost certainly with defect in quality. But a study of other conditions of thyroid enlargement, the contrast afforded by the reversed condition in myxœdema, and especially comparison with other glandular enlargements convinced me that this could not be the sole and essential condition.

It is impossible for me to enter into detail of the comparative study of other enlargements of secreting glands from functional and other causes. I can only state the conclusions drawn from a large series of observations. That the thyroid itself presents remarkable fluctuations in size, especially in women, has long been observed. In a series of cases—not of Graves' disease—which I have had opportunities of observing, marked enlargement of the gland has occurred during pregnancy, subsiding either during lactation or later; and in one or two cases the presence of enlargement in persons with an unusually

large thyroid gland has been noticed to concur with increased rapidity of pulse and a slightly elevated temperature; only, however, from one-fifth to two-fifths of a degree, but persistent. And here I may note that such minor degrees of enlargement and variations in size are by no means infrequent in women and deserve careful study.

I would especially note that it is not the mere size of the gland which is of importance but its structural alteration; for it is quite possible that hyperplasia of the kind I have described—a great alteration in the amount of secreting tissue and greatly exaggerated function—may be present without notable increase in volume. It may well be that it is those cases in which catarrhal and cystic changes are least prominent that the activity of secretion is greater than where there is more derangement of proportion in size. The intensity of the symptoms certainly bears no proportion to the actual size of the gland, some of the severest cases being where it is only moderate in degree.

But what I desire to emphasise is that the nature of the change is such that we can explain it in no other way than as a true hyperplasia, with exaggerated but probably perverted function.

Vascularity of the Thyroid Gland.

It has been alleged by some that the enlargement of the thyroid gland is caused by excessive hyperæmia, and also that in Graves' disease it is always highly vascular. If the thyroid enlargement is due to excessive vascularity, how comes it that no similar enlargement—i.e., with proliferation—occurs in other adjacent parts or from experimental hyperæmia? Whatever hyperæmia may exist, in so far as it is not such as is to be seen in the mammary gland during lactation, it shares with other parts, and neither in physiology nor pathology do we find that hyperæmia alone affords any parallel in the production of such changes.

It appears to be commonly accepted that the thyroid gland actually pulsates in Graves' disease. I have carefully examined many cases and have failed to find any sufficient evidence of this. If we minutely examine the site of pulsation we find it far more marked over the arteries than elsewhere. A thrill may often be detected over the right superior thyroid artery when it cannot be found elsewhere, and a general thrill I have never seen. The apparent thrill appears to me to be due, in the first place, to the relaxation and enlargement of the arteries. It has been shown that the arteries actually enlarge and may undergo irregular dilatation. This enlargement of nutrient arteries corresponds to that seen in all active hyperplasias. For examples may be cited the mammary and uterine arteries. Added to this, we have the pressure by the enlarged thyroid gland both on arteries and veins which must undoubtedly occur. The carotid and its branches must be compressed or stretched and communicate their pulsation in an abnormal degree. The internal jugular vein and the plexus of veins over the thyroid gland must also be compressed. Indeed, it has been suggested that, by its pressure on the jugular, the thyroid gland controls the vascularity of the brain—an hypothesis in which I do not concur. But if the pulsation is only in the vessels, why does not the same phenomenon occur in ordinary goitre? The explanation seems to lie in the relaxed condition of the arteries, which may produce a murmur in the other great vessels, heard over the sternum; and also in the fact that the veins are engorged, not from pressure alone, but from the active changes in the thyroid gland, just as the mammary veins are engorged during lactation. Except in cases in which, through cardiac valvular disease or dilatation, venous pulsation existed in all the visible veins in the lower part of the neck I have never been able to detect any pulsation which could not be accounted for by these causes. The supposed vascularity of the thyroid gland acts as a deterrent to operation; hence the question is of great practical importance.

Relation of other Forms of Goitre to Graves' Disease.

The changes which I have thus described are those which have come under my own observation in Graves' disease, and correspond, as far as can be judged, with those recorded by some writers in typical cases of the disease.[13] Time forbids an analysis of the scanty published records of such cases; but an examination of the literature, especially the surgical, gives a very different impression; for there are a considerable number of cases in which, in long-standing goitres of very large size, unilateral or general, symptoms corresponding more or less in degree have developed. It is true that in many the complete symptom-complex was wanting; but in some few all the ordinary symptoms were present. Hence, whilst physicians appear to think that the thyroid condition is of little importance, surgeons seem to tend to the view that any goitre, if large enough or causing pressure, might cause the disease. It is obvious that if any goitre could, solely by causing pressure on vessels and nerves, give rise to Graves' disease, my whole line of argument becomes untenable.

It might, indeed, be fairly maintained that the condition of the thyroid in the most typical variety, such as we meet in medical wards, must be that which should afford the true explanation of the pathology, and that, in so far as the other cases—e.g., those of chronic unilateral enlargement—were not explicable by mechanical pressure, their pathology would probably be the same. The fact that the general life-history of the common form is so different should suggest that it is not solely pressure which causes it in the chronic tumours. The subject is one of great interest and one demanding consideration of many points. Time forbids their discussion here, but I may refer to the admirable papers of Th. Wette,[14] who has made an exhaustive analysis of the subject, and has arrived at conclusions which bring these cases also within the range of a like causation.

Operative Treatment.

In investigating the literature of surgical interference in exophthalmic goitre great difficulty is met with, owing to the fact that the cases are often very imperfectly recorded, or that the presence of a moderate degree of tachycardia has sufficed to cause a case to be recorded as one of Basedow's disease. One very important practical conclusion from this is that the statistics of recovery after operation for Graves' disease are unreliable as a guide to the physician in recommending and the surgeon in performing operations for partial removal. In spite of this, the number of cases fully recorded, and undoubtedly true cases, in which cure of the disease has resulted, is sufficient to encourage operation, and the small mortality in cases treated under strict antiseptic precautions removes one great objection to operation. In no case which I have found recorded did any excessive hæmorrhage occur from cutting through the gland itself, the chief source of hæmorrhage being the enlarged veins on the surface and the comparative abundance of small arteries around the gland. It was my purpose to give some details of the recorded cases; but since the subject has been so fully studied in Wette's recent paper I need not do more than refer you to it. It has proved unnecessary to remove the entire gland. Removal of one lobe—or even, in some cases, of the isthmus or some especially enlarged portion—has sufficed not only to arrest the symptoms but to cure the disease. In some cases the exophthalmos has disappeared almost immediately after the operation—a fact strongly antagonistic to the view that it depends on increase of orbital fat. Indeed, the observations in favour of this theory are so open to doubt from various points of view that it is surprising it should ever have been seriously entertained.

(To be concluded.)

[13] Mr. Quarry Silcock: Transactions of the Ophthalmological Society, vol. vi., p. 104.—Drs. Grainger Stewart and Gibson: British Medical Association, July, 1893.

[14] Archiv für Klinische Chirurgie, 1892, pp. 652 and 875.

A CONTRIBUTION TO THE DIAGNOSIS OF GOUT.

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THE diagnosis of articular gout is in many instances admitted to be difficult. If the term be restricted—as it ought to be—to the series of symptoms which differs from all similar series of symptoms by the presence of urates in the affected parts, then the sole reliable means of distinguishing this form of arthritis is a tophus somewhere in the integuments. As, however, this pathognomonic sign is met with in not more than 9 per cent. of the cases according to the statistics of Scudamore and in 46 per cent. of those observed by Sir Alfred Garrod,[1] there remains, even after careful elimination of all that are doubtful, the greater number, in which the characteristic deposit can be inferred only from the clinical

[1] Gout and Rheumatic Gout, third edition, p. 55. London, 1876.

peculiarities and the alleged etiological factors. Commonly it is held that pain in the muscles or a painful swelling of a joint is gout if it follows immediately upon, or within a few hours after drinking champagne or beer; or if it occurs in even an abstemious individual whose ascendants suffered in a similar manner. Possibly, or probably, that opinion is correct; still there is no proof that those events are connected as cause and effect; nor, if so, that the link which unites them is necessarily of the kind presumed. The opportunities of testing it are not too frequent; but when they are given and used, the conviction comes home that the painful swelling of the big toe, the hereditary disposition, and the habitual indulgence in alcoholic drinks are neither severally nor collectively the infallible guides they are proclaimed to be. Notwithstanding the combination of all those circumstances, it often happens that, contrary to expectation, no urates are found post mortem. In the face of such results to adhere with Sir Dyce Duckworth[2] to the clinical diagnosis, but to question the permanence of the uratic infiltration as taught by Sir Alfred Garrod, is hardly a satisfactory procedure; for, on the one hand, there is an imperfect induction, and, on the other, a fact beyond cavil.

Additional evidence, however, for and against the existence of gout may be obtained by examining the regional glands. In the classical treatises on the disease there is no mention of pathological changes in the lymphatic system, and this silence might lead to the assumption that the absorbent glands and vessels did not participate in the process. Indeed, Sir James Paget expressly states: "I do not know of any gouty diseases of the lymphatic system. It may be noted, perhaps, as a fact worth very careful study, that amongst all the parts that gout affects and the widespread degenerations to which it may conduce the lymphatic vessels or glands seem not to suffer."[3]

Be this as it may, their exemption from the influence of the diathesis is not so absolute as alleged. Lancereaux[4] describes inflammations of the contiguous lymphatic vessels in connexion with successive attacks of gout in the big toe and in the knee-joint. Such lymphangitis is, in all probability, merely the early stage of the extensive leucophlegmatic œdema which is generally present in the typical paroxysm and lends itself to the "pitting on pressure" to which Sir Alfred Garrod attaches diagnostic importance.[5] So also enlargements of the lymphatic glands were seen by Orth[6] in a case of gouty necrosis of the kidneys and by Sir Dyce Duckworth[7] in one of tophaceous polyarthritis with considerable leucocytosis.

Although the references to the subject are doubtless very scanty, it does not therefore follow that the facts are exceptional. It is easy to understand how it came about that the matter received scant attention, for, as a rule, the changes are not of a nature to obtrude themselves, and the inconvenience which they produce is so slight, compared with the intense suffering from other sources, that there is no special inducement in the acute attacks, much less in the free intervals, to look beyond the habitual seat of the disease. But, as far as my experience goes, I may without hesitation say that, in all cases of arthritis which are shown to be true gout by the presence of tophi, the regional glands are abnormally and persistently enlarged; and the increase in their size is often attended by spontaneous pain and always by tenderness on pressure with each return of the paroxysm. In illustration of this point I may adduce the following abstracts of a few of my observations.

CASE 1.—A man thirty-three years of age came under observation on Oct. 30th, 1879. He was by occupation a painter's labourer and had been for more than ten years engaged in mixing together lead and oil. He had been for years accustomed to drink from three to four pints of ale a day, and as a rule some whisky also. There was an alleged hereditary disposition to gout on the mother's side. Six years before, during one night, he had had a sudden onset of pain and swelling in the left big toe, which symptoms lasted for about fourteen days. Shortly afterwards the right knee, left hip, and both hands were affected in the same way. Since then there had been several such attacks. State of the patient at date of observation:—He was a spare man, of middle stature, with great pallor and œdema of the face. There were tophi in the right ear and in the left ligamentum patellæ. The metacarpo-phalangeal joints of both sides, as well as both knees and ankles, were swollen but painless. The right little finger was deformed. He had enlargements of the submaxillary, axillary, and inguinal glands, none of which were tender. The patient volunteered the statement that when he had had gout in the hip the lumps in the groin became of the size of small oranges and were very painful. There were palpable enlargement of the spleen and leucocytosis. On Nov. 5th he had a fresh attack with much constitutional disturbance and a temperature at 3 P.M. of 102·5° F. The second joint of the left middle finger, the left wrist, left knee, and both ankles were red, swollen, and painful. The axillary and inguinal glands were of the size of pigeons' eggs and were painful on palpation. The right ear was red, swollen, and painful, and there was diffuse redness on the right side of the neck. The right submaxillary and cervical glands were very large and very painful on palpation. Death took place on Nov. 20th. At the post-mortem examination the glands of the neck, thorax, and inguinal region were found to be very large, of a dark, reddish-brown colour, very firm, and presenting on section a uniform aspect.

CASE 2.—A carpenter aged thirty years was admitted into the Victoria Park Hospital under my care on May 10th, 1881. There was an alleged hereditary disposition to gout on the father's side. He had himself been subject to the disease for the previous two years. At the time of admission he had tophi in both ears and painful swellings of the fourth right and third and fifth left metacarpo-phalangeal joints, and of the right elbow and wrist. The axillary glands on both sides were very large and tender on pressure. He had hyperæsthesia of the sternum, clavicles and ribs, as well as pain in the splenic region. Both knee-joints contained fluid, and the left heel was swollen and painful. The inguinal glands on both sides were swollen, more so on the left, and they were tender on pressure. Between May 11th and June 20th most of the large and small joints were successively affected, and there was a considerable increase in size and tenderness of the regional glands.

CASE 3.—A painter aged forty-six years was admitted into the hospital on Feb 14th, 1882. Nineteen years previously he had had a painful swelling of the right knee; three years ago the big toes had been attacked. He was accustomed to drink three quarts of ale a day. At the time of admission he had œdema of the face. There was a tophus on the left ear and a marked blue line of the gums. The cervical and axillary glands were enlarged. He had redness, pain, and swelling of the right knee-joint. The right inguinal glands were very large and painful on palpation.

CASE 4.—An ironmonger aged forty-nine came into the hospital on May 15th, 1883. Twelve years previously he had the first attack of gout in the left big toe. Since then he had had repeated seizures in several joints. There was an alleged hereditary disposition to gout on the father's side. He used to drink spirits and beer freely, but latterly not more than two quarts of beer daily. On admission he was pale and had œdema of the face. There were tophi in the left ear. He had an acute gouty inflammation of the left hand. The left cervical and axillary glands were large and painful. The inguinal glands were also large. The patient volunteered the statement of having often had large and painful swellings in the groin. He complained of pain in the left hypochondrium, but there was no palpable enlargement of the spleen: examination of the blood showed a marked leucocytosis.

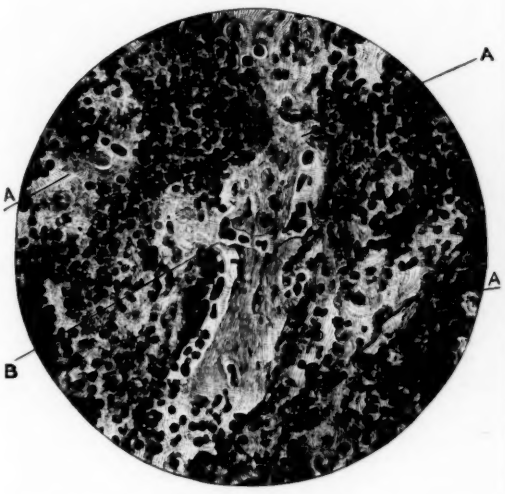
The histological details were examined in an inguinal and a mesenteric gland from a typical case of gout in the Central London Sick Asylum under the care of Mr. Hopkins, to whom I am indebted for the specimens. Both of them were in colour and consistence exactly like those which I had seen in Case 1, above referred to—namely, dark reddish-brown and very firm. The inguinal gland was 1⅜ in. long, ⅝ in. broad, and ½ in. thick. The microscopic section showed that the increase in size was mainly due to a hyperplasia of the hilus tissue, which had caused atrophy of the follicular strands and had greatly encroached upon the cortical nodules. The central or medullary portion looked spongy, owing to the large number of gaping vessels and vascular spaces, varying in size and shape—some round or oval, others angular or slit-like—and generally provided with a well-developed endothelium. Most of the vessels were normal and empty, as already stated, but in some there was globular

[2] A Treatise on Gout, p. 51. London, 1889.
[3] Clinical Lectures and Essays, second edition, p. 376. 1879.
[4] Traité d'Anatomie Pathologique, tome ii., p. 479. Paris, 1879-1881.
[5] Op. cit., p. 35.
[6] Ebstein: Die Natur und Behandlung der Gicht, p. 15. Wiesbaden, 1882.
[7] Op. cit., p. 199.

stasis. Between the large vascular spaces there still remained narrow strips of the normal fibrous hilus stroma; the rest consisted of spindle cells, which were arranged partly in an intricate network of capillaries and partly in concentric layers with round, semilunar, or narrow longitudinal spaces in their midst, so as to give the impression that they had proliferated around the vessels, constricting their calibres. There was much infiltration, with fragments of leucocytes. The capsule and the trabeculæ were thickened, of a fibrocellular tissue, and very vascular. The more striking changes were observed in the cortical nodules, which chiefly consisted of clusters of vessels, of which twenty-two sections were counted in a single field (Zeiss D. O. 3). A few of those vessels were normal, but dilated and with globular stasis; the majority of them bore mere traces of fibrous degeneration, but their walls were permeated by a hyaline substance as shown in Fig. 1, A; while the remnants of the endothelium—Fig. 1, B—indicated that their calibres were not completely obliterated. The remaining portion of the recticulum was not markedly altered, and the lymph cells were for the most part large, with large nuclei and narrow protoplasma borders. The lymph sinuses were considerably reduced.

The mesenteric gland was irregularly oval in shape, 1½ in. long, nearly 1 in. broad in the centre, and ½ in. thick. Its

FIG. 1.



Section of a cortical nodule of an inguinal gland. A, A, A, Clusters of dilated vessels with degenerated walls, and infiltrated with hyaline substance. B, Endothelium. Zeis, D.O. 3.

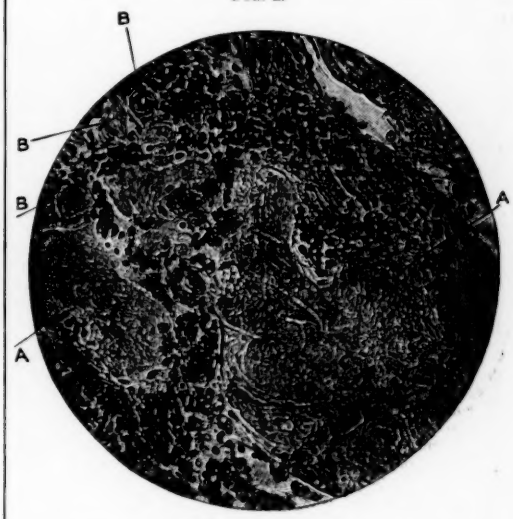
component parts were not clearly differentiated. The hilus stroma was scanty, coarsely fibrous, and infiltrated with hyaline substance, as were the vessels which it contained. The trabeculæ were few and narrow; those corresponding to the medullary portion were in the same state of degeneration as the stroma, while those that started from the capsule were permeated by large cells and contained dilated axial vessels. The lymph sinuses had almost entirely disappeared. The capsule itself was thickened, cellular, and very vascular. The central portion of the gland consisted of numerous large and small vessels, each surrounded with a thick mantle of endothelial cells and embedded in a scanty adenoid tissue. Here, again, the degenerative changes were especially marked in the cortical nodules. Here, also, there were clusters of vessels, as shown in Fig. 2 A, with fibrous degeneration of their walls, the substance of which had a hyaline infiltration; but the fibrillation was more distinct than in the inguinal gland.

These changes in the glands are doubtless the result of an angeiomatous process. They are not, however, peculiar to gout, but frequently occur in cases in which a prolonged increase of vascular pressure is associated with some form of dyscrasia.[8] It would be hazardous to say, from an examination of one case, that they are the same in all cases, although the similarity in the macroscopic appearances of the parts and the known pathology of the disease afford some grounds for such a supposition. I have once seen in a man aged sixty-seven years an inguinal gland, which remained enlarged after repeated attacks of gout in the big toe, become painful and soften. No solution of continuity in the integuments from which it drained could be detected. It was opened by Mr. Manser of Tunbridge Wells.

But the pathology of those enlarged glands is for the present of less interest than the bare fact of their existence—a fact so constant in its occurrence as to fairly allow the deduction that a given case of suspected gout is *not* gout in their absence. Their presence, however, affords no positive proof, but has only a relative diagnostic value, for this reason, that glandular enlargements are also to be observed in other forms of arthritis.

In one of them—gonorrhœal rheumatism—Sir Alfred Garrod has pointed out the resemblance of its local symptoms to those of gout.[9] Its mode of onset, however, its typical localisation, and its associated phenomena are so characteristic as to preclude the possibility of mistaking the one for the other. The question as to gout could only arise in those extremely rare instances in which

FIG. 2.



Section of a cortical nodule of a mesenteric gland. A, A, Clusters of enlarged and obliterated vessels, the walls of which are in a state of partly fibrous, partly hyaline degeneration. B B B, Dilated pervious vessels, with degenerated walls. Zeis, D.O.3.

gonorrhœal rheumatism attacks the small articulations; yet these are never the first to be so affected, but are involved only after the disease has lingered for some time in a large joint and has thus declared its nature. Apparently, gout affords no immunity from gonorrhœa; it is said, on the contrary, to constitute a powerful predisposition to purulent inflammation of the urethra,[10] so that the two may be "blended," as Sir Dyce Duckworth terms it. In that case, if the existence of a tophus shows the character of the antecedents, and if, at the same time, there is a great deal of constitutional disturbance, a fresh deposit of urates may safely be assumed. A careful examination of the urine, more especially in reference to the quantity of uric acid discharged in twenty-four hours, will help towards a right decision.

The other form of arthritis, which is infinitely more frequent than is generally supposed, occurs in connexion with the so-called myeloma[11] or myelogenous lympho-sarcoma. The

[8] Leo Weiger: Ueber hyaline Entartungen in den Lymphdrüsen. Virchow's Archiv, vol. lxxviii., 1879.

[9] Op. cit., p. 21.

[10] Sir Dyce Duckworth, op. cit., pp. 177 and 316.

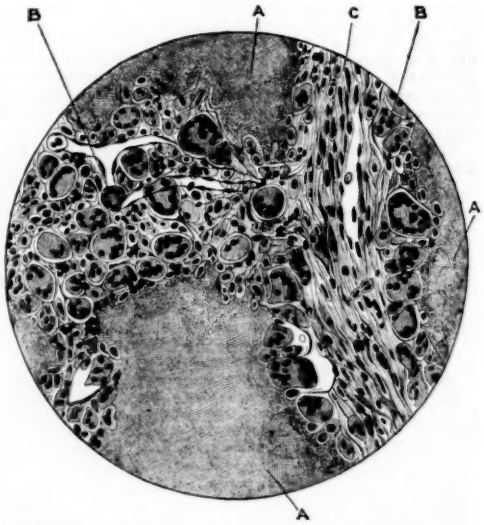
[11] Rustizky: Multiples Myelom, Deutsche Zeitschrift für Chirurgie, Band iii., Hefte 2 und 3, 1873.—H. Busch: Ein Fall von multipler primärer Sarcomatose des Knochenmarkes, &c., Inaugural-Dissertation, Halle, 1873.—Zahn: Beitrage zur Geschwulstlehre, Deutsche Zeitschrift für Chirurgie, Band xxii., 1885.

process, as is well known, consists of an abnormal vegetation of adenoid tissue in the bone marrow, which on post-mortem examination is found to be soft (lymphoid) from the preponderance of cellular elements; or at times it is sclerotic from the development of fibrous tissue, the fat being completely and the trabeculæ and cortical substance of the bone more or less extensively atrophied. If the proliferation is mainly active in the subchondral part, it is apt to perforate the cartilage and to induce in it metaplastic changes[12]; it may also pass out of the medullary cavity, along the channels of the nutrient vessels, and then spread in the periarticular tissues. In these circumstances myeloma is prone to simulate rheumatism—not merely rheumatism in the loose sense in which the term is commonly used, but an acute form which as nearly as possible approaches the adopted prototype in all its essentials, and another subacute or chronic form which not infrequently leads to extensive fibrous ankylosis and deformities of both the large and small joints.[13] From what I myself have seen I have no doubt that those cases of rheumatism which were especially noticed on account of their supposed complications with "rheumatic buboes,"[14] or the chronic arthritis with enlarged glands,[15] are really instances in point.

But myeloma may also counterfeit gout when the joints of the hands and feet are primarily or mainly affected. The articular manifestations are, as a rule, preceded for an indefinite period by fixed or neuralgiform pains in those parts of the osseous system which retain lymphoid marrow throughout adult life. At this time the clinical picture is not sufficiently distinct nor, perhaps, adequately appreciated to allow any other but the soothing diagnosis of neuralgia, lumbago, &c. At last the fingers, toes, heels, ankles, and wrists become simultaneously or successively red, swollen, and painful[16]; and after a week or more all those symptoms subside, either without leaving any traces or with the production of the deformities above mentioned. The patient and his friends almost welcome the open attacks of the enemy, whose existence had long been suspected; for gout has no terrors but is considered rather a mark of some social distinction. But even the unbiased observer may meet here with equivocal and misleading elements. There may be, and often is, a considerable amount of obesity concealing the inroad of the anæmia. The patient usually preserves an almost ravenous appetite and, without being necessarily intemperate, is in the habit of taking a fair quantity of stimulants. The disease itself may run a course, protracted for years,[17] during which the process is arrested in one bone and reappears in another,[18] so that paroxysms of acute suffering alternate with intervals of comparative well-being, which enables the sufferer to resume without much effort his usual pursuits of business or pleasure. A small number of lymphoid or fibroid neoplasms of various sizes may develop themselves either imperceptibly or under slight irritation in the skin of the face or around the joints. Nay, the thread test, if practised, would reveal the presence of uric acid in the blood and the serum.

No resemblance could be closer and nothing could apparently more fully justify a diagnosis of gout upon the current principles than the facts just enumerated. This seeming identity in the clinical aspects of both diseases obtains additional support from a similarity also in the anatomical details; for I may here state that the gouty nodules and nodes—commonly called tophi—whether upon the ear, in the pulp of the finger, around a joint, or within a bone, not infrequently present a texture which is not unlike some forms of sarcoma. Fig. 3, for instance, shows a section of a nodule in the first metatarsal bone in Case 1, as above related. The tophus was of white colour, of the size of a cherry stone, situated about a quarter of an inch from the inner margin of the articular cartilage and surrounded on all sides by spongy tissue. Scrapings from the white mass gave the murexide test. On microscopical examination there were found hyaline (Ebstein's necrotic) areas (Fig. 3, A, A, A), thickly coated with urates in the shape of needles, which have been washed out in the present preparation, and between them nests of giant cells (Fig. 3, B, B) and vascular fibrous tissue (Fig. 3, C). Yet, notwithstanding all those points of contact, there remains this difference—that in the one set of cases there are uratic deposits and in the other set of cases there are none—a difference, as it appears to me, due more immediately to the relative states of the kidneys. For in gout there is a recurrent form of nephritis which terminates in granular atrophy, and though the compensation of the defect may for a time be almost complete, it is yet readily disturbed, with well-known consequences; whereas in the myeloma

FIG. 3.



Section of a tophus in the subchondral part of the first metatarsal bone of Case 1. A, A, A, Hyaline (Ebstein's necrotic areas. B, B, Nests of giant cells. C, Vascular fibrous tissue. Zeis, D.O. 3.

here under notice those organs, if involved at all, are found to be larger than normal and the seat of a diffuse or circumscribed lymphomatous infiltration, in spite of which changes they continue to eliminate all waste products as long as the energy of the heart is not too much impaired. In addition to the copious watery discharges from the skin and the gastro-intestinal canal, the quantity of urine within the twenty-four hours is above the normal and of high specific gravity; the uric acid excreted during the same period is relatively and absolutely increased, and continues so before, during, and after the paroxysms almost until the fatal end. Casts are of rare occurrence, at all events in the early stages, but albumose is generally present from the commencement and persistently appears throughout the course of the disease.

Wimpole-street, W.

[12] Waldeyer: Diffuse Hyperplasie des Knochenmarkes, &c., Virchow's Archiv, vol. lii., p. 316. 1871.

[13] Vide Busch, loc. cit. — Zahn: loc. cit. — Kozuszkiewicz: Ueber Pseudoleukæmie, Inaugural-Dissertation, Halle, 1887.

[14] Brissaud: Revue de Médecine, 1885.

[15] Barlow: Clinical Society's Transactions, vol. xxii., p. 328.

[16] O. Kahler: Zur Symptomatologie des multiplen Myeloms, Prager Medicinische Wochenschrift, 1889, No. 4.

[17] Fifteen years in the case of Waldeyer; eight years in that of Kahler.

[18] Powick quoted by Mosler: Symptomatologie der myelogenen Leukæmie, Berliner Klinische Wochenschrift, December, 1876, p. 703.

ON THE ADVANTAGE OF THE STEEL SCREW IN THE TREATMENT OF UNUNITED FRACTURES.

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THE results of the treatment of ununited fractures by operation have in my hands differed very considerably from those obtained from the performance of similar operations upon recent simple or compound fractures. I have operated on a large number of recent fractures, both simple and compound, of such bones as the patella, tibia, fibula, clavicle, jaw, &c., and have always succeeded in obtaining good bony union. In every case I have thoroughly exposed the fragments, removed everything that intervened between the broken surfaces, and retained them in accurate apposition

by means of wire sutures. Such operations present no difficulty whatever unless the comminution is considerable. In ununited fractures however, the results obtained by operative interference are too often disappointing. They usually bear a direct proportion to the length of time that has elapsed between the fracture and the operation. Even after the most thorough removal of the acquired amphiarthrodial joint and the most careful attempts to retain the sawn surfaces in apposition by means of silver wire I have too often found that bony union did not result. In the case of such bones as the patella and olecranon the result of the operation is always satisfactory, since if bony union is not obtained the fibrous tissue uniting the fragments is so dense and shallow as not to allow of any play whatever or to make the discovery of this imperfect union difficult or even impossible; but in the case of ununited fractures in the shafts of long bones, and especially in those of the lower extremity, the presence of ligamentous union, however firm, means a more or less completely useless limb. In order to obtain success in operating in such cases I find that the two following conditions must be complied with: 1. The surgeon must not be satisfied with removing a thin layer of bone on each side of the fibrous ankylosis, but a good thick slice must be taken off the end of either fragment so as to expose the normal structure of the shaft. It would seem that the bone in the immediate vicinity of the acquired amphiarthrodial joint undergoes such vascular changes as interfere with its taking an active share in the formation of callus and bony ankylosis of the fragments. If a thick slice of bone which has been sawn off one of the fragments in such an operation is divided vertically, the bone in immediate relationship with the false joint will be found to be dense and comparatively evascular, and this condition will be found to extend for an unexpected distance into the shaft. Therefore in order to obtain bony union with any certainty it is necessary to sacrifice a considerable portion of the length of the limb, and the amount of bone removed from each fragment must bear a direct relationship to the duration of the interval that has elapsed since the injury. Such operations are sometimes the most difficult in surgery, especially when performed for ununited fractures of the tibia in its upper third. The difficulty is sometimes greatly increased by the necessary removal of a portion of the fibula, this bone not having been broken at the same time as the tibia, or, if it had been, union had ensued in it. Such conditions of non-union of fractures in the leg are, in my experience, always the result of the application of the principle of the vertical footpiece, and I trust that since the fallacy of that treatment has been satisfactorily exploded[1] surgeons will not have to deal with such difficult cases in the future. 2. The recently sawn surfaces of bone must be retained immovably in accurate apposition. I have frequently found the greatest difficulty in retaining the freshly sawn surfaces of bone in accurate and firm apposition by means of silver wire, for the reason that the oblique sectional planes presented by the fragments are in different vertical levels and tend, when fastened together with wire, to separate vertically, however firmly they may be clamped together during the boring of the holes, and however great the strain exerted on the wire during its fixation in position. Again, the circumstances are quite different from those present in a recent fracture, where, as is well known, if sufficient care and trouble are taken the broken surfaces will correspond exactly. In the case of the ununited fracture the plane of the fracture is often only to be guessed at, since it has been much modified by the formation of callus &c. I have been much disappointed on several occasions, on cutting down on cases of ununited fracture in which an operation had been performed without success, to find the loop of wire lying comparatively loose in the bones. I therefore determined to try what I could do by using screws instead of wire and then found that I was able to bring and to retain the opposing surfaces of bone into the most accurate and forcible apposition by means of this powerful instrument. The use of two screws is much more advantageous than of one alone, for the reason that any rotation of the bony surfaces upon one another around the screw as an axis is completely obviated. The screws produce no irritation whatever and do not require to be removed. I should have found some of these operations impracticable but for Gowan's osteotome, which is an invaluable instrument under these circumstances. With it one is enabled to ensure accuracy of parallelism in the sectional planes with a minimum of damage to adjacent vessels (a matter occasionally of no little importance), and by using the clamp portion of the instrument without the saw the cut surfaces can be held firmly and immovably in apposition during the boring of the holes and while the screw is being driven in. It is well to remember that it is by means of the final turns of the screw that firmness and accuracy of apposition are obtained.

St. Thomas's-street, S.E.

[1] The Fallacy of the Vertical Footpiece, Brit. Med. Jour., 1893.

CASE OF CEREBELLAR HÆMORRHAGE, WITH HYDATID DISEASE OF LIVER.

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A MARRIED WOMAN fifty-two years of age was admitted to the Counties Asylum, Carlisle, on July 15th, 1892, suffering from an attack of mania. She had been in the asylum on three previous occasions for the treatment of mania, the first time being in 1876. The patient was a tall spare woman, a good deal run down in bodily health. She had a mitral regurgitant murmur, otherwise no marked organic disease was noted in any of the viscera; there was the scar of an incision for removal of a tumour of the right breast, operated on before her first attack of insanity in 1876. The family history was negative. Her former attacks of excitement had been of short duration, and on none of these occasions had any bodily disorder beyond mitral incompetence been detected while she was in the asylum. She remained subacutely excited for some time after admission, and up till the date of her death she had frequent short but severe outbreaks of excitement; in the intervals she was quiet, orderly, and a good worker. With good diet and the administration of tonics her bodily condition improved, and she became stouter and more healthy in appearance. During all the time she was in the asylum she made no complaint of sickness or abdominal pain; her abdomen was not visibly distended, and there were never any symptoms calling for detailed physical examination of the abdominal viscera. On the afternoon of Sept. 18th last the patient was in a restless, excited state, running about and talking in a noisy, incoherent manner. She suddenly complained of feeling sick, fell down powerless, said she felt as if she were dying, and almost immediately became unconscious; her bowels were moved loosely. I saw her within a few minutes of the attack and found her completely comatose, lying on her back with her eyes half open; the conjunctivæ were quite insensitive; the pupils were contracted, the left being slightly larger than the right; both pupils reacted very sluggishly; the respiration was 16 per minute, laboured and stertorous; the pulse was 78, irregular, and the tension rather high. She was hemiplegic on the left side, but occasionally moved her right arm and leg; the superficial and deep reflexes were abolished. There was a rough mitral systolic murmur. The coma steadily deepened, the pulse became very feeble, flickering and irregular, the respiration became slower and less noisy, and the pupils contracted to the size of pin points. She died within an hour of the onset of the attack. Just at the time of death the pupils became widely dilated.

Post-mortem examination, eighteen hours after death.—The brain showed thickening and adhesion of the dura mater, opacity of the arachnoid, and some atrophy of the cerebral convolutions, with excess of subarachnoid fluid; the vessels at the base were atheromatous. The cause of death was found to be a large hæmorrhage into the right lobe of the cerebellum, the interior of which was completely disorganised and filled with recent blood-clot; there was some laceration of the under surface of the right lobe of the cerebellum, from which blood-clot was protruding, exercising pressure on the medulla and pons. The left ventricle of the heart was hypertrophied. The mitral valve was incompetent, its cusps being thickened and contracted; the base of the aorta was atheromatous. The right lung was bound down by extensive old adhesions to the chest wall, otherwise it was healthy. The left lung was healthy and free. The kidneys were cirrhotic. The spleen, stomach and intestines were healthy. The liver was greatly enlarged; it weighed 98 oz. The enlargement affected the upper and posterior portion of the right lobe, which projected upwards towards the right pleural cavity; there was little or no displacement downwards of the lower edge of the liver; there were two large cysts lying side by side in the region of

this projection; the part of the capsule overlying them contained thick cartilaginous plates of various sizes; the larger cyst lay to the left, being about the size of a cricket ball; on cutting into it much pale, watery fluid escaped; the outer wall of the cyst was composed of firm fibrous tissue and condensed liver structure. Lining this internally were the remains of the wall of a parent hydatid cyst, to which numerous minute daughter cysts were adherent; lying free in the interior there was a great number of daughter cysts varying in size from a pigeon's egg to a small pearl. Many of the larger of these had ruptured and collapsed, and these, together, formed a mass of gelatinous material. The smaller cysts from the size of a marble downwards were filled with clear fluid; they had the ordinary structure of hydatid cysts, and on microscopic examination of their inner surface there were found numerous clusters of echinococcus heads, each with a circle of hooklets. The smaller cyst was about half the size of the other and was similar to it; a larger proportion of the daughter cysts had ruptured; there was less free fluid, but a considerable quantity of thick, brown grumous material containing degenerated cysts.

Remarks.—This case presents the following features of interest: 1. Hæmorrhage into the cerebellum is not a very frequent cause of death. In this case the hæmorrhage was very extensive and the effused blood caused severe compression of the medulla and pons, hence the rapidly fatal issue. From the end of 1872 till now there have been 894 deaths in this asylum, and in every case but two there has been a post-mortem examination; in only one other case was cerebellar hæmorrhage the cause of death. Of ninety-six consecutive fatal cases of cerebral hæmorrhage at Guy's Hospital in only one was the cerebellum the seat of hæmorrhage.[1] 2. As is often the case, the hydatid cysts of the liver caused no symptoms or discomfort during life. Hydatid disease seems to be very rare in Cumberland. Of 1144 deaths in this asylum since its opening in 1862 the above is the only case in which this disease has been discovered on post-mortem examination. A case of hydatid disease of the liver treated in the Cumberland Infirmary, Carlisle, by Dr. H. Barnes in 1879 was the first case of this disease recorded in the statistical tables of that infirmary from 1841 till that date; nor had there been any such case under treatment at the Carlisle Dispensary during the same period. The rarity of cerebellar hæmorrhage as a cause of death, as well as the infrequency of hydatid disease in this district, have been my reasons for placing this case on record.

Garlands, Carlisle.

TWO CASES OF OVARIOTOMY DURING PREGNANCY.

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THE following cases of ovariotomy during pregnancy are types of classes presenting well-marked clinical differences. In Case 1 the conditions were exceedingly simple; the tumour was of moderate size and entirely without adhesions, and the operation therefore was easy. The course of the pregnancy was most probably not affected by the operation; for although premature labour came on at the seventh month, this was nearly three months—more precisely, eleven weeks and a day—after the ovariotomy. It seems reasonable to conclude that its occurrence was due to some cause independent of the operation. In Case 2, on the other hand, the conditions were very different. There had been a well-marked attack of peritonitis, laying the patient up for a month some time before she became pregnant; there was also another attack of peritonitis when she was between two and three months pregnant. Again, as regards diagnosis, in the first case it presented no difficulty, the abdomen was lax, and the tumour small and freely movable, so that it was easy to separate it from the uterus, and under chloroform, indeed, to feel the sacral promontory between the uterus and the tumour. In the second case, on the other hand, the abdomen was tense even when the patient was under the influence of an anæsthetic, and though the evidence of pregnancy was clear from the blueness of the vagina and vulva, and from the enlargement and the intense blueness and softening of the vaginal portion of the cervix, the evidence of the existence of the ovarian tumour was much less definite, as no distinct separation between it and the uterus could be recognised. In favour of the presence of an ovarian tumour were the two well-marked attacks of peritonitis, and the fact that on admission to hospital the upper limit of the abdominal swelling was three fingers' breadth above the umbilicus, although there had only been amenorrhœa for a little more than three months; in addition the upper part of the tumour had a much thinner wall than that of the pregnant uterus, and no evidence of the presence of a fœtus could be detected by repeated examination, either by palpation or auscultation in the upper part of the abdominal tumour, nor did the walls of this part of the swelling harden and soften alternately. As regards the operation, the close adhesions between the cyst and the uterus constituted a formidable complication, for the surface of the uterus from which the cyst wall was separated bled freely. Although this was temporarily checked by packing sponges round the uterus, the bleeding evidently soon recommenced, for, on reopening the abdomen two hours after the operation, a considerable quantity of bloody fluid was found in the peritoneum. The use of iodoform gauze packed against the oozing surfaces was strikingly illustrated in this case. It will be seen that one strip of the gauze was left in for ten days without any ill effect. I should consider that the occurrence of the miscarriage on the second day was chiefly due to the irritation of the uterus produced by the pressure of the iodoform gauze. This case also illustrates the importance of early operation in cases of ovarian tumour. No doubt the attack of peritonitis in February (before she became pregnant) was due to the presence of the tumour, and, had the case been thoroughly investigated then, it would no doubt have been discovered, and ovariotomy could have been performed without the serious risk that arose in this case wholly in consequence of the patient having become pregnant.

CASE 1.—*Ovariotomy at the fourth month of pregnancy; no adhesions; uninterrupted recovery; premature labour at the seventh month; a subsequent pregnancy going to full term.*—A woman twenty-five years of age was admitted into the London Hospital under my care on Jan. 25th, 1892. She had been married four years, and had had one child a year and eight months previously. She had had a miscarriage about six months after her marriage; she thought it was due to running to catch a train. She suckled the child for twelve months. At the time of her admission to hospital she thought herself to be three months pregnant, as she had "seen nothing" for that time. Three weeks ago something came down in the front passage; it went back on lying down. When the swelling came down she had difficulty in passing water; at the same time there was a slight show of blood. There has, however, been no hæmorrhage since. On examination under anæsthesia a swelling the size of a child's head was found occupying the umbilical region, and extending up towards the epigastrium as far as three fingers' breadths above the umbilicus. The tumour was freely movable, and evidently contained fluid. It was separated by a distinct depression from a swelling lower down, which rose from the pelvis, and was, in fact, the pregnant uterus. Under anæsthesia it was possible to sink the hand between the tumour and the uterus so as to feel the sacral promontory. The patient went home for a short time, and was readmitted to hospital on Feb. 17th. The uterus then reached to within three fingers' breadths of the umbilicus. On Feb. 29th the abdomen was opened by an incision starting from one inch above the umbilicus to two inches below it. The cyst was tapped and drawn out of the wound in the usual way. There were no adhesions. The pedicle was tied with a Staffordshire knot, then another ligature round the whole pedicle, and the tumour was cut away. It was an ordinary multilocular ovarian cyst. The peritoneum was not washed out, and the wound was completely closed in the ordinary manner. The patient did well, the temperature never rising above normal. She went home on March 27th. The fœtal heart was heard for the first time on March 22nd. I heard afterwards that she was confined on May 17th prematurely, at the seventh month—that is to say, about three months after the operation. Recently (last November) I heard from her that she was again pregnant, and, indeed, within a few days of full term. Before she became pregnant this time the intervals between the menstrual periods were from six weeks to two months.

CASE 2. *Ovariotomy during pregnancy at about the fifth month; tumour closely adherent to uterus; pelvis packed with iodoform gauze to stop bleeding; miscarriage on second day*

[1] Fagge's Principles and Practice of Medicine, second edition, vol. i., p. 562.

after operation; good recovery.—A woman thirty-one years of age was admitted to the London Hospital under my care on Sept. 18th last. She had been married for four years and had had two children, the last in March, 1892. She had had no miscarriages. The last child was suckled for eleven months—i.e., till last February. In December, 1892, she menstruated for the first time since the confinement. She first menstruated at the age of twelve years and was regular every four weeks, the periods lasting for six or seven days and being unattended by pain. When she was seventeen years of age there was amenorrhœa for eighteen months, and after that she again became regular. The family history was good. In February of this year she suffered from "inflammation of the lower part of the stomach." This lasted for a month; the pain "doubled her up." During this time she had a slight vaginal discharge of blood. The abdomen was much swollen, and the medical man in attendance told her that she had a tumour; at the end of this illness, however, he told her he thought that he had "dispersed" it. From February to June 4th she menstruated regularly and appears to have been in fairly good health. From June 4th up to the time of her admission to hospital she had not menstruated and considered herself to be pregnant. About the middle of August she became very ill and did not call in the medical man who had attended her in February, but sent for Dr. Downes of Hornsey; he found her to be suffering from peritonitis, with constant vomiting and great prostration. The abdomen was distended and very tender. As the acute symptoms subsided Dr. Downes detected what he believed to be an ovarian tumour, and asked me to admit her to the London Hospital with a view to operation. When admitted to hospital the abdomen was prominent and tense. The umbilicus was level with the skin. A tumour was felt, evidently containing fluid and rising out of the pelvis. Its upper limit was about three fingers' breadths above the umbilicus. Nothing was at this time heard over the tumour. On vaginal examination the vulva and vagina were found to be distinctly blue and the cervix soft and intensely blue. On Sept. 21st the patient was anæsthetised and examined again. Even then the examination was not completely satisfactory owing to the tense condition of the abdominal walls, but the uterus was found to be retroverted, and there seemed, to the outside hand on the hypogastric region, to be a slight groove between the body of the uterus and the main swelling in the abdomen. At this time a souffle was heard in the hypogastric region in the middle line. On Oct. 5th the tumour in the abdomen reached a finger's breadth higher than on admission. On vaginal examination the swelling felt in the posterior fornix had disappeared, and the cervix was pointing in its normal direction, so that the uterus had spontaneously regained its normal position. On the 18th the tumour was a good hand's breadth above the umbilicus. The upper part of the tumour seemed to be more movable than before, and appeared to have a thinner wall than the lower part, the thicker-walled portion reaching about three fingers' breadths above the pubes. On vaginal examination ballottement was obtained for the first time. On the 26th the measurements were as follows:—Umbilicus to pubes, 8½ in.; umbilicus to tip of xiphoid cartilage, 6½ in.; maximum girth of the abdomen (at the umbilicus), 32½ in. On Oct. 26th, at 2 P.M., the abdomen was opened in the usual way, except that the lower end of the incision was not carried as low as usual. The swelling was found to be an ovarian tumour, adherent to the abdominal parietes at the lower half of the incision. There were also numerous adhesions to the omentum, which were tied in several pieces and divided. The tumour was adherent on its under and posterior surface to the uterus, which was about the size corresponding to five months' pregnancy. There were some adhesions between the tumour and the anterior surface of the uterus. The relations of the tumour to the uterus were, in fact, somewhat like a cap fitted over the top of it, and closely adherent to it in several places. The tumour was tapped in the usual way and found to contain a tar-coloured fluid. It grew from the left ovary. The right ovary was healthy. When the tumour had been separated from the uterus the pedicle was transfixed and tied with Bantock's knot and another ligature round the whole pedicle. Wherever the cyst had been adherent to the pregnant uterus there was a free oozing of blood; the abdomen was repeatedly irrigated with hot water containing a drachm of tincture of iodine to the quart, but it had little effect on the oozing. An attempt was made to check the oozing at one or two places where it was most noticed by passing a fine silk ligature under the site of it. The punctures made by the needle in doing this, however, bled freely. Sponges were packed around the oozing surface, but it was some time before the bleeding appeared to be sufficiently controlled to allow the wound to be closed. I saw the patient about 6 P.M., and it seemed to me probable that some bleeding was going on internally. I therefore took out two stitches; there was a good deal of bloody fluid in the peritoneum, but no clots were to be felt. A little chloroform was given, and nine strips of iodoform gauze, each measuring six yards in length, were packed into the abdomen round the uterus; the ends of the gauze were left hanging from the lower end of the wound. One fresh deep suture was then inserted above the ends of the gauze and tied. Some of the iodoform gauze was removed in thirty-six hours, and the remainder (as was believed) forty-eight hours after the operation. The pulse before removal of the gauze was 170. The patient miscarried early on the second day after the operation. Two rubber drainage-tubes were put in after removal of the gauze. During the first four days after the operation there was more or less vomiting and the patient was fed by nutrient enemata; during the same time the pulse was very rapid, varying from 120 to 150, but on Oct. 31st it fell to 100. The temperature only once rose to 100·2° F. (on the 28th), and was then normal till Nov. 5th, when it rose to 100°. The wound was dressed at first three times a day, then twice, and afterwards once. One drainage-tube was removed on Oct. 31st and the other on Nov. 2nd. On Nov. 5th—i.e., ten days after the operation—the temperature rose to 100° after having been normal for several days. The wound was explored with a probe, and it was found that a piece of the iodoform gauze had been left in. It was removed and a small drainage-tube was inserted, it being finally removed on Nov. 18th. By Dec. 4th there was no longer any sinus and the patient got up for the first time; she had been kept in bed much longer than usual, and much against her will, so that the sinus might be completely healed. She went home on Dec. 9th. The temperature remained normal after Nov. 5th.

Wimpole-street, W.

A FIRST SERIES OF FIFTY OVARIOTOMIES: A PLEA FOR THE PERFORMANCE OF OVARIOTOMY BY OBSTETRIC PHYSICIANS.[1]

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THE publication of a series of cases of ovariotomy at the present day would seem to need some apology. I have three reasons for writing this paper. The first is that I consider it a useful custom for everyone who performs ovariotomy to publish complete lists of his cases, with dates and other means of identification, and with a statement (sufficiently detailed in the fatal cases) of the other abdominal sections which he has performed during the period to which his lists refer. The second reason is that, in the series of cases hitherto published, there has usually been a noteworthy absence of reference to such important points as the number of cases in which the wound failed to unite by first intention or in which stitch-hole abscess occurred, the number of cases in which sinuses existed when the patient was discharged or in which ligatures came away subsequently, hernia at the site of the scar, and the after-history of the cases. In this connexion also I would point out that, while it is often stated that an operation has been performed with antiseptic, with aseptic, or with no special precautions, it has rarely been stated what are the actual precautions which have been taken. Upon these points I give information in the present paper. My third and my chief reason for writing this paper is that I think the time has arrived when the obstetric physicians in London, the men who do the bulk of the teaching of gynæcology, should by their publications show that the operation of ovariotomy, when performed by themselves, is at least as safe in a general as in a special hospital. To University College Hospital, where ovariotomy has been performed by the obstetric physicians for twenty years, the obstetric physicians of London owe a debt of gratitude, for it is

[1] A paper read at a meeting of the Medical Society of London on the 11th inst.

mainly due to the success of my master, Dr. John Williams, that the practice of allowing obstetricians to operate has spread to other general hospitals. In carrying on the tradition of my predecessor I shall be more than satisfied if this small communication of mine has any influence in bringing about a further extension of the generosity of our surgical colleagues—namely, the entire giving over of operations on the uterus and ovaries to the obstetric physicians of our medical schools. Such being the object of my paper, I have not thought it necessary to encumber it with minute particulars of the operation in the individual cases, the methods of removing tumours of the ovary and broad ligament being now sufficiently well known; but I have given such particulars of the cases as show the nature and approximate size and difficulty of removal of the tumours, regretting that the absence of facilities for weighing the patient immediately before and after the operation has prevented me from giving the exact weights of the tumours. Many of the cases have great clinical and operative interest, an account of which I hope to publish on a future occasion. For the method of operating I lay no claim to merit; I have followed in the footsteps of Dr. John Williams, to whom I owe what I know of ovariotomy. If modesty would permit me to make a personal claim, it would be that I have been *careful* and have exercised the closest personal supervision and scrutiny in every case. To the resident obstetric assistants who have helped me at the operations I wish to convey my thanks for the zeal, enthusiasm and conscientiousness with which they have carried out their duties.

In addition to the publication of a list of cases upon which he has operated, it is desirable that an operator should state whether any cases have come under his care upon which he has *not* operated. Two patients with simple ovarian tumours, in spite of my urgent advice and entreaties, obstinately refused to be operated upon. With these exceptions I am able to state that I have operated upon every case in which I have diagnosed ovarian tumour, and it has not been malignant, however unpromising the case might be, without an eye to statistical results and without any selection of cases. This is, I know, not the universal custom even with operators of established reputation; but statistics where there is any selection of cases do not give the true results of the operation. Neither have I tapped any patient, though six cases had been aspirated by other practitioners—not necessarily those given in the table—before they came into the hospital. The tapping of ovarian cysts, unless they are undoubtedly malignant or unless the patient is suffering very acutely from some pulmonary affection or grave general disease independent of the tumour, is, in my opinion, an unjustifiable procedure. Besides the danger of hæmorrhage and sepsis there is the risk of disseminating papilloma and malignant disease, the impossibility of removing the contents in some cases and the certainty of not curing the patient. Except under the rare circumstances mentioned above, I object wholly to tapping, even as a preliminary to operation. I have seen operations which otherwise would have been perfectly simple converted into the most terrible ones by the adhesions set up by peritonitis following tapping; and ovariotomy would, in skilled hands, at the present day be almost free from danger if practitioners would devote attention to the early diagnosis of these tumours and would abstain from this dangerous practice of tapping. Had I refused to operate on any case or sent it away "relieved" by aspiration I might have avoided some difficult operations; but I should also have missed the satisfaction of saving some apparently almost hopeless cases, the recovery of which has given me more gratification than any other event in my medical career. When the diagnosis of non-malignant ovarian tumour has been made I have always advised operation, and my experience of dangerous cases, such as ruptured, suppurating and septic cysts, has led me to the conclusion that the worse the condition of the patient the more urgently necessary is prompt operation. Then I wish to say something about "incomplete ovariotomy." This is a dark corner in which many unsuccessful operations have been buried, and I think nearly every operator of repute has made a little list of these incomplete operations which are not counted in his statistics of "ovariotomy." It will be found that the mortality of these cases is high. There is to be said in favour of the division into "ovariotomy" and "incomplete ovariotomy" that, inasmuch as an incomplete operation may be in its immediate result comparatively safe—though in cases of ovarian tumour it is almost always ultimately fatal—the inclusion of such incomplete cases in a list of ovariotomies might place the unskilful operator on a level with the skilful one as far as statistics of immediate mortality are concerned;[1] but the number of incomplete operations will be an index of the skill of the operator quite as much as his immediate mortality. On the other hand, the exclusion of incomplete operations from lists of ovariotomies enables an operator to say in an adherent fatal case that he did not remove the whole tumour—"a bit was left behind," the operation was "incomplete"—and so his ovariotomy record is kept up. This exclusion of incomplete cases has even been used to explain away a death on the table before the operation was finished. What a patient who has an ovarian tumour wants to know is the risk she runs in having the tumour removed; this information can only be obtained from tables in which complete and incomplete cases are included, and I am strongly of opinion that in lists of ovariotomy every case should be given in which an attempt has been made to remove the tumour. For my part I have not had an incomplete operation in a case of ovarian tumour, but in cases of broad ligament cysts there were two in which I did not completely remove the most deeply embedded portion of the cyst; they both healed and recovered. Case 8 I should now be able to remove. Case 6, on account of burrowing around the uterus, could not have been completely removed without hysterectomy; operation had been refused in one special and two general hospitals; she also healed and was well as regards the operation three years later. Another important point about which most operators are silent is the number of cases in which union takes place by first intention and the number of stitch-hole abscesses which occur. With the exception of the site of the drainage-tube, which usually did not immediately heal, *primary union* without any suppuration took place in forty-seven cases; in the three others it also apparently occurred, but there was subsequently some suppuration. In Case 2 an abscess in the lowest stitch-hole—due, I believe, to infection brought about in removing the stitches—led to the formation of an abscess containing about two ounces of pus. After this had been opened the little cavity rapidly closed. It was the only stitch-hole abscess I had in the whole fifty cases. In the second case (Case 24) the tumour was suppurating and the pus burrowing in the abdominal wall at the time of operation; a little pus subsequently collected behind the lower end of the wound; after it had been evacuated the cavity gradually closed. In Case 38 the whole superficial part of the wound broke down and subsequently granulated up. It is interesting to note that in the same patient, after the removal of a small fatty tumour from the dorsum of the foot, the wound took nearly two months to heal; yet I think the suppuration must have been due to inoculation of the wound. The fact that in only three cases has there been stitch-hole abscess or suppuration has led me to formulate this opinion: unless there is sepsis at the time of operation stitch-hole abscess or suppuration of the wound is the fault of the operator. I have further to add that every patient has been discharged with the wound soundly healed and free from sinus, and I have never known a pedicle ligature to come away after operation. These accidents are, I believe, usually due to infection of the ligature either before or during the operation and to the too-frequent use of the drainage-tube. In no case has a hæmatocele developed in the broad ligament after the operation; I think this accident must be due to careless tying of the ligature or to the employment of an unreliable or fancy knot.

After these introductory remarks I now proceed to give an analysis of the cases, as given in the table on the opposite page. Of the fifty cases, forty-four were operated upon in University College Hospital and six were private patients in a nursing home. The private cases are indicated in the table by a single initial letter. The age of the patient was from ten to twenty years in two cases, from twenty to thirty years in thirteen cases, from thirty to forty years in twelve cases, from forty to fifty years in eleven cases, from fifty to sixty years in seven cases, from sixty to seventy years in four cases, from seventy to eighty years there were no cases, and from eighty to ninety years there was one case. These figures call for no special remark, except that Case 46 was at the time of operation over eighty-two years and three months old, having been born on Sept. 18th, 1810. She is, as far as I know, the oldest patient upon whom ovariotomy has been performed with the exception of Dr. Homans' case,[2] who was apparently a few weeks older.

[1] See, for instance, the cases of Omori and Ikeda (Centralblatt für Gynäkologie, 1892, p. 1009). In addition to the 5 deaths, there were 14 incomplete operations—that is to say, 19 non-successes out of 100 cases.

[2] Boston Medical and Surgical Journal, 1888.

TABLE I (Abridged).—*First Series of Fifty Ovariotomies.*

Number.	Age.	Children.	Abortions.	Date of Operation.	Duration of Operation in Minutes.	Side.	Adhesions.	Drainage.	Highest four-hour Temperature in first week.	REMARKS. G = Girth at Umbilicus. GG = Greatest Abdominal girth.	Alive and free from Hernia.
1	63	2	0	15/10/87	60	L	Yes	Yes	101.2 R*	Multilocular ovarian, size of three Rugby footballs. Previously tapped several times.	Oct. 30, 1893.
2	46	4	0	29/10/87	40	L	Yes	No	101.8 R	Large multilocular cyst; much solid growth. Stitch-hole abscess formed.	Oct. 22, 1893.
3	67	18	1	3/11/87	—	L	Yes	Yes	101.6 R	Large multilocular ovarian. G=45½ in. T=100.4°, P=132, and patient very ill two hours before operation.	Seven months later.
4	42	0	0	8/4/89	—	L	Yes	Yes	101.4 R	Large broad ligament cyst 10½ in. above pubes. G=35½ in. Tumour enucleated, broad ligament stitched, and dropped.	Dec. 31, 1889.
5	28	0	0	12/8/89	—	R & L	Yes	No	101.0 R	Two multilocular ovarian cysts, size of orange and small apple.	Six months later.
6	39	0	0	25/8/89	—	L	Yes	Yes	101.2 R	Multilocular broad ligament cyst, burrowing around uterus. Main part enucleated; drained.	End of 1892.
7	47	5	6	3/9/89	20	R & L	No	No	100.6 R	Large left ovarian (17 pints). G=38½ in. Right ovarian fibroid (size of filbert).	Oct. 24, 1893.
8	26	2	0	14/9/89	—	L	Yes	Yes	100.0 R	Small broad ligament cyst, size of duck's egg. Partially enucleated; drained.	—
9	50	0	0	27/5/90	—	R	Yes	No	100.4 R	Multilocular ovarian, size of eight months' uterus (11 pints). Twisted pedicle.	Oct. 29, 1893.
10	66	0	1	27/6/90	—	R & L	No	No	100.8 R	GG=35 in. Left ovarian to within 1 inch of ensiform. Cystic right ovary.	Oct. 24, 1893 (small hernia).
11	58	0	0	2/8/90	—	L	Yes	No	101.4 R	G=47 in. Multilocular ovarian, larger than football.	Oct. 11, 1893.
12	18	0	0	15/11/90	40	L	No	No	101.8 R	2½ gallons ascitic fluid; cystic multilocular ovarian, size of uterus at term, previously tapped; pleural effusion (left). 97 ounces drawn 2 days before operation.	End of 1892.
13	59	4	0	10/2/91	23	R	No	No	100.0 R	Ruptured multilocular ovarian, holding about 1 pint.	Oct. 22, 1893.
14	54	0	0	20/3/91	28	L	Slight	No	101.6 R	Multilocular ovarian, size of large football.	Oct. 24, 1893.
15	27	0	0	1/4/91	22	L	No	No	99.2 A	Unilocular parovarian, size of small football, removed with ovary.	Nov. 1, 1893.
16	23	1	0	16/4/91	60	R	Yes	Yes	103.4 R	Suppurating dermoid, size of emu's egg. Ulcerative colitis, which probably infected bloody serum in pelvis.	Died.
17	28	0	1	6/5/91	50	L	Yes	No	99.0 A	Multilocular ovarian, size of goose's egg.	Nov. 11, 1893.
18	40	0	0	16/5/91	36	L	Yes	No	99.4 A	Multilocular ovarian, size of uterus at sixth month.	Oct. 24, 1893.
19	40	2	0	26/5/91	30	R & L	No	No	101.0 A	G=42 in. Right multilocular, size of uterus at term, 11½ in. above pubes; left, size of pear. Twisted pedicle.	Nov. 2, 1893.
20	42	0	0	15/6/91	44	L	Yes	No	101.6 A	Ruptured malignant ovarian; removed. G=43½ in.	June, 1892 (recurrence).
21	27	0	0	26/6/21	65	R & L	Yes	No	99.2 A	Right unilocular ovarian, with Fallopian tube opening into it; size of man's head. Left tubo-ovarian, size of fist. Facial lupus.	Nov. 2, 1893.
22	22	0	0	3/7/91	40	R & L	Yes	No	100.2 A	GG=51½ in. Large right multilocular dermoid. Small blood cyst of left ovary.	April, 1893.
23	49	4	1	14/9/91	20	L	No	No	101.0 A	Small parovarian, size of goose's egg; enucleated. Hole in ligament stitched and dropped.	Oct. 3, 1893.
24	32	1	0	12/10/91	50	L	Yes	No	101.0 A	G=35½ in. Suppurating ovarian (over 16 pints). Fever and extreme emaciation before operation. Pus burrowing in abdominal wall. Tumour removed. Suppuration recurred at lower angle of wound. Confined August 13th, 1893.	Oct. 23, 1893.
25	45	3	0	26/10/91	40	R & L	Yes	No	99.6 A	G=38½ in. Large multilocular ovarian within 2 inches of ensiform. Small 2-inch multilocular cyst of other ovary. Previously tapped.	Nov. 3, 1893.
26	26	1	0	30/10/91	30	L	No	No	99.6 A	G=31½ in. Parovarian (over 10 pints) removed with ovary. Delivered August 28th, 1891.	Oct. 26, 1893.
27	52	4	0	9/11/91	23	R	No	No	100.3 A	Multilocular ovarian (10½ pints).	Oct. 23, 1893.
28	37	1	1	18/11/91	65	R	No	Yes (3 days)	100.4 A	Parovarian (6½ pints collected); enucleated. Broad ligament stitched and drained.	Oct. 30, 1893.
29	54	4	0	11/12/91	45	R & L	Yes	No	100.0 A	GG=32½ in. Right multilocular ovarian (4 pints+2 lbs. 6 oz.). Left multilocular ovarian, size of cocoanut.	Oct. 26, 1893.
30	39	0	0	31/12/91	45	R	Yes	Yes (2 days)	101.6 A	G=51 in. Multilocular ovarian (26 pints). Influenza, 10th to 15th day.	Nov. 4, 1893.
31	27	3	0	16/2/92	30	R	Yes	No	100.0 A	GG=34 in. Pregnant 3 months at operation. Flaccid multilocular ovarian (6 pints). Delivered of twins, August 12, 1892.	Nov. 1, 1893.
32	41	2	0	10/3/92	49	R	Yes	Abdominal wall for 24 hours	99.0 A	Ovarian. Three pints fœtid pus. Tapped twice three weeks before operation (10 pints pus). Trocar left in three weeks. Septicæmia.	Oct. 24, 1893 (small hernia).
33	35	6	0	27/3/92	32	R	Yes	No	101.0 A	GG=31½ in. Multilocular ovarian, size of uterus at term. Twisted pedicle. Patient confined, December 15th, 1891.	—
34	64	7	2	4/4/92	27	L	No	No	99.8 A	GG=42 in. Multilocular ovarian (6 pints collected, some lost).	Nov. 1, 1893 (hernia).
35	31	1	0	19/4/92	45	R & L	No	No	102.0 A	Right multilocular ovarian, reaching 8 in. above pubes. Left cystic ovary. Swelling noticed after difficult instrumental confinement 21 months ago.	Oct. 27, 1893.
36	32	0	0	28/4/92	29½	R & L	No	No	99.2 A	Right multilocular ovarian, size of shaddock. Left multilocular ovarian, size of small orange.	June 15, 1893.
37	39	10	5	4/6/92	59	R	Yes	No	101.2 A	Delivered December 28th, 1891. Tumour noticed 10th day. Suppurating multilocular ovarian, with twisted pedicle, size of large fist. Complicated with pleurisy.	Oct. 31, 1893.
38	34	1	0	9/6/92	80	L	Yes	Yes (24 hours)	102.2 A	Ovarian, size of fœtal head. Complicated with hydrosalpinx (removed).	Oct. 10, 1893.
39	40	0	0	16/6/92	50	R	Yes	No	99.4 A	GG=41 in. Multilocular ovarian, within 2 in. of ensiform.	Oct. 30, 1893.
40	24	0	0	22/6/92	60	R	Yes	No	101.6 A	Multilocular ovarian (8½ pints). Tapped 3 months ago, 3 gallons removed.	June 14th, 1893.
41	30	3	1	17/9/92	35	R	Yes	No	100.6 A	Dermoid ovarian (13 ounces of fluid, and hair, and fat).	Jan. 16, 1893.
42	31	0	0	29/9/92	20	R & L	No	No	100.0 A	Multilocular ovarian (10 pints). Left cystic ovary.	Oct. 14, 1893.
43	26	0	0	2/11/92	25	R	No	No	99.6 A	Multilocular ovarian, size of shaddock.	Months later; married.
44	43	0	0	5/12/92	70	L	Yes	Yes (gauze in broad ligament)	102.8 A	G=45 in. Malignant colloid cystic tumour of left broad ligament, previously tapped three times, weighing about 70 lbs.; invading the uterus. Enucleated. Hysterectomy.	Oct. 5, 1893.
45	37	0	0	11/12/92	30	R & L	Slight	No	100.4 A	Right unilocular ovarian within 1 in. of ensiform. Left cystic ovary. Convalescence delayed by thrombosis of left femoral vein.	Oct. 31, 1893.
46	82	5	0	19/12/92	17	L	No	No	99.2 A	Multilocular ovarian. G=37 in. Tumour rises 10 in. above pubes. Twisted pedicle.	Nov. 1, 1893.
47	23	1	0	31/1/93	29	L	Yes	No	102.0 A	G=36½ in. Confined 6 weeks. Suppurating ovarian (15 pints). T=103.6°. Papilloma in interior.	Oct. 31, 1893.
48	19	0	0	20/2/93	37½	R	Yes	No	101.4 A	G=30 in. Multilocular ovarian (6 pints). Twisted pedicle.	Oct. 23, 1893.
49	58	1	0	6/3/93	70	L	Slight	No	100.0 A	Multilocular papillomatous ovarian (8½ pints puriform fluid).	July 28, 1893 (small ventral hernia).
50	26	2	0	15/4/93	72	R & L	No	No	100.6 A	Multilocular ovarian dermoids. Right, walnut; left, swan's egg. Large ventral hernia (excised).	July, 1893 (slight separation of recti).

NOTE.—All the cases recovered except No. 16. * R=Rectal; A=Axillary.

Although she only wore an abdominal belt for about six weeks after getting up she has now a firm linear scar without the slightest tendency to hernia and I saw her on Nov. 1st last, in very good health for a person of her age. Thirty-six of the patients were married, seven of these being nulliparous; fourteen were single women. In all cases I have observed the time occupied from the commencement of the abdominal incision until the dressing was applied. In eight of these cases I neglected to record the observation at the time. Most of these eight operations lasted about half an hour and none lasted an hour. In the forty-two cases in which the time is noted the operation lasted from ten to twenty minutes in four cases, from twenty to thirty minutes in twelve cases, from thirty to forty minutes in eight cases, from forty to fifty minutes in eight cases, from fifty to sixty minutes in four cases, and over one hour in six cases (of the whole fifty). The longest duration was eighty minutes.

I think it most desirable that operators should publish the length of time occupied by their operations. I am of opinion that any time spent beyond three-quarters of an hour adds appreciably to the danger of an operation. Yet I hear of operators taking as long as two and a half or even three hours over an adherent case. My own practice is in favour of rapid removal of the tumour, but of spending sufficient time in cleansing the peritoneum, ligating the pedicle, and accurately suturing the wound. Of the fifty cases, in fifteen the tumour was on the right side, in twenty-two on the left side, and in thirteen on both sides. In thirty-three cases there were adhesions, often very extensive and strong (see table). The cases which had been previously tapped were very adherent, with one exception (Case 12); in this case there were twenty pints of fluid in the peritoneum and nearly five in the left pleura.

Drainage was employed in eleven cases: of these, five were broad ligament cysts; in Case 32 the abdominal wall only was drained. The peritoneal sac was drained in five instances only; amongst these the fatal case occurred. In this case (Case 16) the Keith's drainage-tube slipped into the abdomen, an accident which has led me to use a glass drainage-tube with two large flanges, which render such an accident impossible. I believe that most of these five cases would have done equally well without the tube, and that drainage is resorted to far too frequently by some operators.

Flushing the peritoneal cavity has not been employed in any case. I regard it as unnecessary and even dangerous, and it seems to frequently require the subsequent use of the drainage-tube. I would restrict it almost entirely to cases of encysted septic or purulent fluid.

The temperature has been taken for five minutes in the rectum and for fifteen minutes in the axilla every four hours by day and by night, and I have no trust in charts where it is taken less frequently. It would be useful if operators would agree to the four-hour record and would state whether it is taken in the rectum, axilla, or mouth. On the whole, I think the axillary temperature is most convenient, but the rectal most trustworthy. The rectal temperature is, however, higher by about a degree, and sometimes two or three degrees, than the axillary. In the table I have stated the highest temperature recorded in the first seven days after the operation. This gives a less favourable and less valuable record than the average temperature; but I intend to treat the question of temperature after ovariotomy more fully elsewhere, and I have not thought that for the purpose of this paper the result of obtaining the mere average temperature during the whole week was commensurate with the labour involved. In fifteen cases the temperature is rectal and in thirty-five axillary. The average highest rectal four-hour temperature during the first week was 101·2° F., and similarly the average highest axillary temperature was 100·4°. The highest temperature recorded, 103·4° (rectal), occurred in the fatal case just before death. Of the whole series but one patient died (Case 16). This patient had a suppurating ovarian dermoid tumour of the size of an infant's head, extremely adherent to the surrounding parts. She had also extensive ulceration of the rectum and descending colon; in one place the gut was reduced by this ulceration to its peritoneal coat. The drainage-tube (Keith's) slipped or was pushed by the patient into the abdomen on the second day, but it was easily withdrawn by forceps. She was greatly collapsed after the operation, which was very difficult, and she died with symptoms of exhaustion (probably due to sepsis) in fifty-three hours. There were three or four ounces of clotted blood and bloody fluid in the pelvis, which had oozed from torn adhesions. Coils of intestine were adherent to each other round the drainage-tube and the effused fluid. There seemed to be commencing inflammation of the general peritoneum, but this was not marked. The gut had not been injured by the drainage-tube. I think that infection of the effused fluid took place through the walls of the rectum and colon, which were extensively ulcerated. The remaining forty-nine cases recovered and were discharged well, with the wound completely healed and free from sinus or suppuration. The patients usually got up at the end of three weeks, and were discharged about the fourth week, but when any complication arose they were detained until they had completely recovered. Of the fifty cases forty-two were tumours of the ovary, of which five were dermoids; eight were tumours of the broad ligament or parovarium; one of these was malignant, of enormous size, weighing about seventy pounds, and was treated by enucleation and hysterectomy. Five of the tumours were suppurating (Cases 16, 24, 32, 37, 47); several others had puriform contents, which the microscope showed not to be pus. In all (with perhaps the exception of Case 16) the suppuration followed labour, and was probably occasioned by infection at that time. One case was three months pregnant at the time of operation—she went to term and was safely delivered of twins; eight cases were observed at or soon after labour. Six tumours had been previously tapped, and seven had a twisted pedicle. Two of the cysts had recently ruptured. In the last column of the table I give later information of the patients as to their being alive and free from hernia. I have been able to obtain information concerning forty-eight patients, and it will be seen that hernia at the site of the scar has occurred in four cases. The ages of these patients were sixty-six years, fifty-eight years, sixty-four years, and forty-one years; thus all except the last were somewhat advanced in years. The last was a very bad case of suppurating cyst which had been tapped, the trocar being left in the cyst for three weeks. None of the patients suffer any pain or discomfort from the hernia, but its presence undoubtedly is a source of danger, and I should be glad to adopt any method of treatment which would prevent its occurrence. Reliable statistics upon this important subject are much needed; but the records to be of any value must be given with dates, for until I undertook the preparation of this paper I was only aware that hernia had occurred in one of my own cases. I may add to the information contained in the last column of the table that Case 4 died after operation for intestinal obstruction produced by a peritoneal band about fifteen months after the ovariotomy, and that Case 20 succumbed to peritoneal and pelvic cancer in about fourteen months. Concerning two of the cases I can obtain no information as their addresses are unknown. I have no reason to believe that they are otherwise than alive and well.

The method of operating.—The operations have been performed in a private room at University College Hospital or at a nursing home. The room is usually "sulphured" and occasionally limewashed between the operations. In the hospital cases the patient was moved down two flights of stairs and through four wards into the general ward—in the earlier cases on the seventh day, in the later cases on the third or fourth day. The slight excitement of this journey sometimes caused a temporary rise of temperature. The operation was performed under strict Listerian precautions, including the use of the spray. Although I have now abandoned the spray as unnecessary and inconvenient I think the result of this series of operations shows that its employment is not followed by any serious consequences. The patient is prepared by aperients followed by enemata on the two nights preceding the operation. The skin is washed and a towel soaked in a 1 in 20 carbolic acid solution is placed on the abdomen for three hours before the operation. The operator's and assistant's hands and forearms are washed and scrubbed with soap after soaking in solution of iodine (liquor iodi, two drachms to the pint): they are then immersed in a 1 in 20 carbolic acid solution for about two minutes. The sponges (ten in number) are prepared by beating and washing and soaking for successive periods of twelve hours in the following solutions: 25 per cent. hydrochloric acid, 5 per cent. sulphurous acid, and 1 in 500 corrosive sublimate. They are then placed in a 1 in 20 carbolic acid solution, in which they are kept for at least a week, until the operation, when they are put into a 1 in 40 carbolic acid solution. They are always counted by myself before and after the operation. The instruments (made entirely of metal) are carefully cleaned and brushed after the operation, and before the operation they are boiled for an hour in a 1 in 20 carbolic acid solution, in which they are placed during the operation. Floss silk of moderate thickness is used for

the pedicle and abdominal wound. It is prepared by boiling for three hours in a 1 in 20 carbolic acid solution, and then placed for twelve hours in a 1 in 500 corrosive sublimate solution, then in a 1 in 20 carbolic acid solution, where it remains for at least a week before it is used. Thus prepared it is absolutely safe as regards sepsis. No patient has gone away with a sinus, nor has a ligature ever come away. I prefer floss silk to "Chinese twist" because it is cleaner, of more open texture, less liable to be damaged by manufacture, and can be drawn tighter. In cases of broad or thick pedicles the first knot is seized with forceps; "Chinese twist" is then apt to snap. The pedicle is tied in two halves, and then as a whole with a reef-knot as tightly as possible. To pass the pedicle ligature I used a short, straight, round needle made of "delta" metal; it is much more convenient than the handled needle, it is safer, saves time, and does not rust. If the raw surface of the pedicle is extensive I sometimes stitch it over with fine silk and tie any prominent vessels. Adhesions requiring ligature are tied with fine silk; in the earlier cases carbolised catgut was used. The wound is sewed up by passing the thick silk through all the layers of the abdominal wall and the skin is accurately apposed by fine silk. The wound is dressed with Lister's carbolic gauze—or sometimes with iodoform gauze—kept in place by a many-tailed flannel bandage.

The after-treatment.—Nothing is given by the mouth for twenty-four hours, or, where vomiting persists, for thirty-six hours or more; on the second day barley-water with milk and peptones in small quantities; no solid food is given during the first week. In some cases milk disagrees with the patient and causes vomiting; for these rectal feeding with peptones is employed. No morphia is given except for prolonged sleeplessness; it is rarely required, and better avoided. Rarely is alcohol administered. The bowels are opened by aperient and enema on the eighth day, when the sutures are removed and a strapping is applied. The urine is drawn off (when necessary) every six hours by a rubber catheter kept in a 1 in 2000 sublimate solution. In persistent vomiting and distension, which rarely occur, the bandage is removed, a copious enema is given, and the abdomen is massaged. I have never reopened the abdomen. The patient lies as much as possible on the back for the first week, does not sit up for three weeks, gets up two or three days later, and is usually discharged at the end of the month wearing an abdominal belt, which she is instructed to use for at least a year.

Other abdominal sections.—During the period over which these fifty ovariotomies extend I have also performed eighteen abdominal sections other than ovariotomies, in which cases two patients died. One of these was a case of rupture of the uterus from neglected shoulder presentation; she was moribund from shock and hæmorrhage and died in a few minutes, before the operation was completed. The other was a case of exploratory operation for malignant disease of the ovary and peritoneum. Finding secondary growths in the omentum and peritoneum I closed the wound without removing anything. The patient recovered well and the wound healed by first intention. On the twelfth day, when she was apparently quite well, she suddenly died from pulmonary embolism, the clot having come from a sacculus in the iliac vein, as was shown by the necropsy. The remaining sixteen patients recovered. I append a table of these eighteen cases. These sixty-eight operations constitute the whole of the abdominal sections I had performed up to April 15th last:—

Table of Eighteen Abdominal Sections other than Ovariotomies.

Disease.	Number of cases.	Recovered.	Died.
For hydro-salpinx	2	2	—
For pyo-salpinx	1	1	—
For tubal mole	1	1	—
For pelvic abscess	4	4	—
For hernia after hysterectomy	1	1	—
For ruptured uterus	1	—	1*
Oöphorectomy for fibroids	1	1	—
Cæsarean section (Porro) for fibroids obstructing labour	1	1†	—
Abdominal hysterectomy for fibroids	2	2	—
Exploration for malignant ovarian tumour	1	—	1‡
Exploration for fibroid of abdominal wall	1	1	—
Exploration for abscess in broad ligament (opened per vaginam)	1	1	—
Exploration for retro-peritoneal sarcoma	1	1	—
Total	18	16	2

* Died on the table. † Also the child. ‡ Embolism.

I now proceed to consider the cases of ovariotomy as bearing upon the question, "Who should perform ovariotomy in the general hospitals?" The present first series of fifty ovariotomies (with one death) is, as far as I know, the most successful of any such series which have yet been published. I am very far from desirous of claiming for this result any personal credit, which belongs to my predecessor, whose methods I have followed; but I think that the result is a justification of the system—adopted for twenty years at University College Hospital and of late years at most of the other general hospitals in London—of allowing the obstetric physicians to perform ovariotomy. Only a few years ago it was thought to be highly dangerous to perform the operation in a general hospital, and at University College Hospital until 1884 the operation used to be done in a neighbouring house; but since that date it has always been performed within the walls of the hospital. I think the present series of cases shows that when performed by a specialist ovariotomy is at least as successful in a general as in a special hospital. There was at one time a danger that major gynæcological operations would disappear from our great medical schools. This danger is now past, but there are still some who assert that obstetric physicans should not perform operations, or, at least, not abdominal sections or only those abdominal sections which are of obstetric importance, such as Cæsarean section. Now it is quite impossible to carry on an obstetrical or gynæcological practice without operating. An obstetric physician may limit his operations, but he cannot exclude them; and there seems to be no reason why he should be allowed to remove a uterus by vaginal and not by abdominal section (the former being more difficult than, and often quite as dangerous as, the other), and no reason why the field of his operative activity should be limited by the plane of the pelvic brim. And it does appear to be as illogical as it is to the patient unfair to allow Cæsarean section—the greatest of all operations and, when complicated with tumours, one of the most difficult and dangerous—to be performed by an obstetric physician who is not allowed to remove a simple ovarian cyst. It is often said that the operation ought to be done in general hospitals by general surgeons and not by obstetric physicians. Against this view it may be urged that, supposing all the surgeons of a general hospital do the operation and that one or more have not a tendency towards gynæcological specialism (for which their clinical opportunities afford no justification), then each surgeon would have but three or four ovariotomies annually at the present rate of admittance; and it is generally acknowledged that extensive experience is more necessary in abdominal than almost any other kind of surgery. With such a system patients would cease to come and medical practitioners would cease to send them to these inexperienced general surgeons, and the cases would go to the special hospitals and be lost to the medical schools. Neither does the system of allotting the ovariotomies to one surgeon for a short term of years meet the requirements of the case, for the services of the surgeon are lost at the time when they have become most valuable. At some schools it is the custom for both surgeons and obstetric physicians to do these operations. Where this practice has had a fair trial it is found that the great bulk of the cases go to the obstetric physicians. I have heard the opinion expressed by surgeons who admit that obstetricians should operate that surgeons should occasionally perform a simple ovariotomy to "keep their hand in," the obscurer and difficult cases going to the obstetric physician. Such an arrangement is obviously unfair to the obstetric physician and places him at a disadvantage when compared with the gynæcologist at a special hospital. The system which most conduces to the interests of the medical schools is undoubtedly either that which places the operation in the hands of one surgeon for a long term of years or that which gives it over entirely to the obstetric physicians. I am not one of those who think that there is any mystery about ovariotomy or that a well-equipped surgeon cannot perform the operation well; but what I maintain is that he cannot perform it *so* well as one who devotes his whole time to the study of this and allied subjects and who keeps himself abreast of the latest advances in gynæcological pathology and treatment, who is daily examining the pelvic organs of women, and who, from the nature of his practice, has acquired skill in diagnosing pregnancy and disease such as no general surgeon has the opportunities of obtaining. In endeavouring to arrive at a right judgment in this matter there are two considerations of prime importance. The first is the welfare of the patients and the second is the teaching of students and the advancement of medical knowledge. How far the welfare of the patient is affected by the operator's being an obstetric

physician I offer the present paper as evidence and regret that few general surgeons have similarly published all their cases. Were this done I believe the question would be at once settled, if not by the statistics of their ovariotomies at least by their errors in diagnosis, such as those lamentable cases in which through ignorance of obstetrics the healthy pregnant uterus has been opened. In order to guard against similar occurrences general surgeons might, it may be suggested, have the aid of the obstetricians in consultation, and this is usually done; but is it fair that the obstetrician who can diagnose a tumour and remove it should be prevented from operating by a surgeon who is only competent to remove it? Is it fair that the treatment of the most important diseases affecting the organs which are the obstetric physician's special study should be taken out of his hands? In any case is it fair that the question should be settled by medical committees in which the surgeons' votes numerically far outweigh the obstetric physicians' votes? Medicine has been divided by our universities, our Royal Colleges, and our medical schools into three great divisions—medicine, surgery, and obstetrics and gynæcology. The third subject, obstetrics and gynæcology, is taught by the obstetric physicians of our medical schools. An obstetric physician without experience of operations labours under great disadvantages in teaching modern gynæcology: he is unable to compare the clinical signs with the actual facts of the case; he who should teach others is deprived of one of the most certain means of teaching himself; while in handing over to the surgeon his cases for operation he is giving up pathological material of the greatest value for the study of that branch of medicine which it is his duty to teach. There is a natural connexion between obstetrics and gynæcology which is convenient in practice and which it is impossible, even if it were advisable, to sever; and since these subjects are the special study of the obstetric physician I think it is right that he should have a free hand in the treatment of the diseases which come within their domain. And I would further appeal to our surgical colleagues in the medical schools to extend their generosity and to give up to the obstetric physicians the operations upon the uterus and its appendages. Such a gift would entail but a small sacrifice upon the surgeon, for the days are past when a general surgeon in London will have any considerable number of gynæcological operations; while it would be appreciated as a great boon by the obstetric physicians. It would enhance the value of gynæcological teaching, promote the cause of scientific medicine, and, above all, it would be, I believe, the means of saving human lives.

Mansfield-street, W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

THREE CASES OF CÆSAREAN SECTION; REMARKS.

(Under the care of Dr. HERMAN.)

WE continue this week the series of cases of Cæsarean section recently performed in London for various abnormal conditions sometimes complicating pregnancy and preventing delivery in the normal manner. The cases which we are publishing constitute an important addition to the list of those performed in this country. Most of them were performed under the direct management of the operator, and had been under observation from an early date, and show the high rate of success which can be attained under such conditions. The diminishing mortality brings before our attention the question as to the desirability of rendering future pregnancies impossible by removal of the ovaries or by treatment of the Fallopian tubes. If the risk of the operation of Cæsarean section is so low as some would have us believe, and the maternal mortality is even less after second operations, are we justified in preventing the patients from having children in the future? In most of these cases the reason for the operation was deformity due to rickets, which deformity was much higher than would have been expected on consultation of Dr. Radford's table. Dr. Radford stated that of fifty-seven cases the pelvic deformity was dependent on rickets in only fourteen, and in the remainder the deformity was owing to mollities ossium.

CASE 1. *Uterine fibroid low down in posterior uterine wall, forming obstruction to delivery, displacing and elongating cervix and causing retention of urine; Cæsarean section with removal of ovaries in the fifth month; recovery; discharge of one uterine suture in fifth week.* (Reported by Dr. A. D. P. Hodges, resident accoucheur, and Mr. Scheurer, clinical clerk.)—A woman thirty-five years of age was admitted into the London Hospital on April 13th, 1892. She had been married one year and nine months, but had had no children or miscarriages. She first menstruated when she was thirteen years old, and was regular till a year ago. During the last twelve months the hæmorrhages had been irregular, occurring more frequently, lasting longer, and being rather more copious than before. The last menstruation ceased on Jan. 7th. Six weeks before admission to hospital she noticed a difficulty in passing her urine. The difficulty becoming greater, she had to send for a medical man, who drew off the urine twice daily. For the previous fortnight she had suffered from a continual dragging pain in the back and she also had pain when the bowels were moved. On April 19th, the bladder having been emptied by the catheter, a swelling was felt rising out of the pelvis and reaching to the umbilicus. On the top of this tumour a hard nodule was felt. By the vagina the cervix was felt, softened as in pregnancy, and pushed forwards and to the right by a hard rounded swelling behind it. There was no displacement of the urethra. By the rectum this swelling was ascertained to be connected with the uterus, not with the pelvic bones. There was no albumen or pus in the urine. The breasts presented the signs of pregnancy, but in a slight degree. The patient was not wasted or anæmic. The softening of the cervix and the condition of the breasts led to the belief that she was pregnant. The diagnosis was thought to lie between a fibroid or some other growth behind the uterus, displacing it forwards, and extra-uterine gestation, the sac being behind the uterus. Should the former diagnosis prove to be correct, it was clear that if the pregnancy went to term there would be serious obstruction to delivery. If the latter was the condition of things, an attempt to empty the uterus would not do harm and would clear up the diagnosis. For this reason, on April 26th three laminaria tents were put in the cervical canal. On April 27th these were removed, twenty-nine hours after insertion. The cervical canal admitted the finger, but nothing like fœtal membranes could be reached. An elastic bougie was passed in for seven inches and left there. On the 29th there had been no labour pains, although the bougie had been in the uterus for forty-eight hours, and it was therefore removed. The diagnosis being still uncertain, it was decided to again dilate the cervix and then to examine the patient under an anæsthetic. Tents were therefore put in on May 2nd, and on the next day the patient was anæsthetised. The tents having been removed, the finger passed into the cervical canal, and the uterus pressed down upon it, it was found that the cavity into which the finger entered was so long that the finger could only just reach its upper boundary. It was supposed—erroneously, as was afterwards proved—that this was the cavity of the uterus, which was empty. It really was the cervical canal, pressed forwards and elongated by the tumour behind it. This erroneous supposition led to the diagnosis that the retro-uterine tumour was an extra-uterine gestation, and therefore abdominal section was advised. This was done by Dr. Herman on May 4th. After opening the abdomen the tumour was found to be the enlarged uterus, with several subserous fibroids in its wall, the largest of these being below and forming the swelling felt by the vagina. In view of the danger incidental to the growth of the tumour during pregnancy and the obstruction it would offer to delivery, it was decided to empty the uterus, and then to remove the ovaries. This was accordingly done. The uterine incision was about three inches long. The uterus was found to contain a fœtus of about four months and a half intra-uterine age. The fœtus and its placenta were removed. The interior of the uterus was swabbed with a 1 in 1000 sublimate solution. The uterine wound was closed with five deep sutures through the muscular wall and peritoneum, and then the peritoneal edges of the wound were brought together by a continuous catgut button-hole suture. After this had been done both ovaries and tubes

were removed. No bad symptoms occurred during convalescence until the nineteenth day (May 23rd), when there was a copious discharge of pus from the lower angle of the abdominal wound. The temperature on the evening before had been 100° F. The opening continued to discharge until June 3rd, when it was examined. A probe went backwards for an inch and a half towards the uterus, and a stitch was found in process of separation. This was removed. On June 13th the wound was quite healed. On the 20th the patient was discharged well. Endeavours have been made to ascertain the subsequent history of this patient, but without success.

Remarks by Dr. HERMAN.—The error in diagnosis is instructive; but I see no reason to doubt that the treatment carried out was the best thing for the patient.

CASE 2. *Flat rickety pelvis; indication for Cæsarean section absolute; operation in first stage of labour; double ligature, with excision of piece between, of one Fallopian tube; removal of outer part of the other; recovery of mother and child.* (Reported by Dr. J. H. Sequeira, resident accoucheur, and Mr. C. L. Jones, clinical clerk.)—A woman twenty-four years of age, pregnant for the first time, was admitted to the General Lying-in Hospital on the afternoon of Feb. 8th last. She believed herself to be at the full term and in labour. The uterus reached the ensiform cartilage. The os uteri was about the size of a shilling. The following were the measurements of the pelvis: anterior interspinous, 9¼ in.; intercristal, 9½ in.; posterior interspinous, 2¼ in.; external conjugate, 6 in. The diagonal conjugate could not be satisfactorily measured. The true conjugate was judged to be about 2 in. or less. The sacrum was convex from side to side. The patient's height was 4 ft. 2½ in.; she weighed 5 st. 11 lb. After consultation with Dr. Cullingworth the patient was transferred to the London Hospital, where she was admitted about 7.30 P.M. At 10 P.M. Cæsarean section was performed by Dr. Herman, Dr. Cullingworth being present. The abdomen was opened in the usual way, the incision being (after it had been sutured) five inches long, extending from the umbilicus to within two inches of the symphysis pubis. After the abdominal incision had been completed the abdominal walls were pressed close to the uterus by an assistant in such a manner as both to make the opening gape and to prevent fluid getting in or bowel getting out. The uterus was then incised, the wound measuring (after it had been sutured) 4⅜ in. long. The membranes were then ruptured. The child was extracted by a leg. An assistant immediately took charge of the child. As soon as the uterus had been emptied the assistant whose hands were on the abdominal wall pressed the sides of the incision backwards, so as to express the uterus from the abdomen, and he then held them together behind the extruded uterus until the suturing of this organ was complete. The placenta and membranes were then peeled off from the interior of the uterus. The interior of the uterus was swabbed with a large sponge soaked in a 1 in 1000 sublimate solution, so as to at once wash the inside of the uterus with the antiseptic and sweep off any fragments of membrane that might still adhere. A hypodermic injection of one grain of ergotin was then given. The uterine wound was sutured with eight interrupted silk stitches, inserted deeply through the peritoneum and muscular tissue, not through the decidua. While these were being put in the uterus was kneaded by an assistant. Each suture was tied before the next one was put in. When the last suture had been tied hæmorrhage practically stopped. The peritoneal edges of the wound were then united by a continuous catgut suture, made in the manner termed by seamstresses the "buttonhole stitch." In this stitch the threads crossing the wound run transversely instead of obliquely, as in the ordinary continuous suture. This was put in from below upwards, and by it the peritoneum was accurately brought together throughout the whole length of the wound, so that when the suture was complete all bleeding outside the uterus was at an end. While the suturing was being done the uterus was occasionally washed with water when blood was seen adhering to it. In order to sterilise the patient one Fallopian tube was then held up with forceps, the meso-salpinx transfixed, and a ligature tied round the loop, so as to tie the tube in two places, and the loop of the cord thus tied was cut away. On the other side the outer half of the tube was tied and cut away. The uterus was then replaced in the abdominal cavity; this was washed out with warm water, and closed with silk sutures in the usual way. The entire duration of the operation was forty minutes. Immediately after the operation the pulse was 120; three hours afterwards it had dropped to 90. After the operation a vaginal douche of a 1 in 2000 sublimate solution was given and one small clot was washed out by it. Hypodermic injections of one grain of ergotin were given every six hours for the first twenty-four hours. The child was living; it weighed 5 lb.; its length was 17 in. The head measurements were as follow: occipito-mental, 4¼ in.; occipito-frontal, 4¼ in.; suboccipito-frontal, 3½ in.; bi-parietal, 3½ in.; bi-mastoid, 3 in.; and bi-zygomatic, 3 in. The lying-in period presented no abnormal features. The catheter was not required. The highest temperature was 101·2° F. on the evening of the third day. The patient suffered very little pain and required no morphia. On Feb. 27th the wound was quite healed. She was allowed to get up on March 8th. The mother and child left the hospital well.

CASE 3. *Second pregnancy; previous delivery by craniotomy; rickety flat pelvis; indication for Cæsarean section relative; operation early in first stage of labour induced a week before estimated full term; removal of outer half of each Fallopian tube; recovery of mother and child.* (Reported by Dr. J. N. Collins, resident accoucheur, and Mr. Owens, clinical clerk.)—This patient was also twenty-four years of age. She had had one previous pregnancy, which was ended by the induction of labour at the end of the eighth month, and delivery by turning and perforation of the after-coming head on July 4th, 1892. The following were the pelvic measurements: anterior interspinous, 10¼ in.; intercristal, 10½ in.; external conjugate, 6½ in.; true conjugate, 2½ in. Her height was 5 ft. 1½ in.; she weighed 8 st. 4 lb. Upon the patient becoming pregnant again, the alternatives of premature labour and Cæsarean section at term were placed before her. She was told that if premature labour were induced the risk to her life would be that of an ordinary labour at term; but the child would either be dead or so small and feeble that it would be difficult to rear it, and this pregnancy would probably be followed by others ending with a similar unsatisfactory result. If she went to term, and was delivered by Cæsarean section, the risk to her life would be greater, but the chances would be about ten to one in favour of her recovery; the child would almost certainly be strong and healthy, and the operation could be so performed as to prevent her becoming pregnant again. She chose the latter alternative. Her last menstruation ceased on Oct. 9th, 1892. From this the probable date of natural labour was predicted as July 14th. On the evening of July 6th last an elastic bougie was put into the uterus. On July 7th, in the forenoon, the patient said that she had slight pains in her back like those of the early stage of labour. The cervical canal would admit the finger. The operation was performed by Dr. Herman at 2 P.M. The abdominal incision extended from a little above the umbilicus to within two inches of the pubes. The abdominal walls were kept applied to the uterus by an assistant in the manner described in Case 2. The uterus was then opened. The placenta was implanted on the anterior wall, the upper two-thirds of the incision going through its site, and therefore in this stage of the operation the hæmorrhage was considerable. The child was extracted by a foot, and then the uterus was expressed by the assistant, as in Case 2. Another assistant took charge of the child. The placenta and membranes were peeled off, and the interior of the uterus was swabbed with sublimate solution. The uterus was then sutured in the same manner as in Case 2—deep interrupted silk sutures and continuous buttonhole catgut suture. The uterus was kneaded by an assistant while the suturing was being done, and when the suturing was finished all hæmorrhage externally had ceased. When this had been done each meso-salpinx was transfixed, each Fallopian tube tied near the uterus and its outer half cut away. The uterus was then washed and replaced in the abdomen. The abdominal cavity was washed out with water and the wound closed in the usual way. The duration of the operation, from the commencement of the abdominal incision to the time it was closed, was twenty-five minutes. No bad symptoms occurred during the lying-in. On the day after the operation the patient said that she felt much better than she had done on the day after her previous delivery. On the evening of the second day she had some colicky pain in the abdomen, and her temperature rose to 101° F. This was coincident with a thunderstorm, which agitated her and, it was thought, might be accountable for the symptoms. On the evening of the fifth day the temperature rose to 102°, but the pulse was 104, and nothing was detected to account for the rise of temperature. It fell on the next day, and never again exceeded 99·8°. The patient

nursed the child throughout; it weighed 7¼ lb. On July 23rd the patient got up. On the 28th the mother and child left the hospital well. The mother's weight was then 6st. 13lb., that of the child being 8½ lb.

ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, MANCHESTER.

A CASE OF MODIFIED PORRO'S OPERATION FOR CANCER OF THE CERVIX COMPLICATING PREGNANCY; REMARKS.

(Under the care of Dr. ARCHIBALD DONALD.)

WE give below the account of a case in which Porro's operation was performed for cancer of the cervix uteri, the most common of the morbid conditions of the maternal soft parts which form insuperable barriers to delivery. In a recent issue of THE LANCET we pointed out that in cases such as this it was considered the best treatment to perform Porro's operation rather than the Cæsarean section, as it was almost impossible to prevent septic contamination of the uterine wound afterwards leading to peritonitis. We were then referring to that variety of the operation in which the stump, after removal of the uterus, is treated outside the abdomen. We do not think that the intra-peritoneal method of treatment in similar cases will receive support, as it is open to the same objections as those urged against the Cæsarean operation.

The patient, a thin, anæmic woman thirty-one years of age, was admitted to St. Mary's Hospital, Manchester, on Aug. 5th last, being at that time about eight and a half months pregnant. The whole of the vaginal portion of the cervix, with the exception of a small part on the left side, was occupied by a hard cancerous growth, which bled freely on being touched. The fœtal heart was distinctly heard. It was decided, for reasons which will be afterwards mentioned, to deliver the child by abdominal section, and the operation was performed on Aug. 10th. After the vagina had been carefully douched and swabbed out with sublimate lotion and all necrotic tissue removed the abdomen was opened in the usual way; the broad ligaments were secured by long forceps, and an elastic ligature was placed round the lower portion of the uterus. A vertical incision was then made into the uterus, the child was extracted, and the cord was cut between forceps. The uterus was brought out of the abdomen and wrapped in a towel wrung out of hot water, while the upper part of the abdominal incision was united by sutures. The elastic ligature was removed from the uterus, and the broad ligament of each side was ligatured from above downwards, care being taken to secure both ovarian and uterine arteries. The uterus was then amputated about the level of the internal os, the peritoneal covering being divided at a higher level than the muscular tissue. There was no bleeding from the stump of the cervix, which was covered in by stitching the peritoneum over it with fine silk. The abdomen was then washed out, a drainage-tube inserted, and the wound was closed. The progress of the case was at first fairly satisfactory; during the first two days after operation there was no sickness, the patient was quiet and fairly comfortable and had a good deal of sleep. There was no discharge from the drainage-tube, which was therefore removed twenty-four hours after operation. On the third day there was a little sickness, but this ceased on the fourth day, and she was then able to take barley-water and brandy by the mouth. The highest temperature recorded up to this time was 101° F., but the pulse ranged from 120 to 140. On the fifth day she complained of a dull pain in the abdomen and the pulse increased in frequency, but she was able to take and to retain a considerable amount of nourishment in the shape of beef-juice and chicken jelly. On the sixth day she gradually became more exhausted, and she died on the seventh day after operation.

Post-mortem examination.—The abdominal cavity was found to be perfectly dry; there were no blood-clots or signs of peritonitis. On examining the stump of the cervix, with the incurved and sutured peritoneum, there were no indications of healing or of inflammatory action to be seen; on cutting the stitches the peritoneum was easily separated. The remnants of the broad ligaments were in the same unhealed condition. Death seemed to have been due purely to exhaustion.

The child was a female, weighing 5lb. 10oz., and measuring 18in.; during the three weeks it was kept in the hospital it thrived very well.

Remarks by Dr. DONALD.—I report this case as a contribution to the treatment of pregnancy complicated in the later months by cancer of the cervix—a subject which presents many difficulties. I believe that in cases in which the cancer is far advanced the life of the child is the most important consideration; in early cases the treatment which holds out a fair prospect for mother and child should be adopted. In the case recorded above, which came under the latter class, there were many courses open — namely: (1) delivery through the natural passages (*a*) by induced labour, (*b*) at term; (2) delivery through the abdomen—(*a*) Cæsarean section, (*b*) Porro's operation (*a*, with extra-peritoneal treatment of stump, *β*, with intra-peritoneal treatment of stump), (*c*) total removal of the uterus by combined abdominal and vaginal operation. The advantages and disadvantages of these various methods appear to me to be as follow. The induction of premature labour is of benefit in so far that it saves time and enables the surgeon to operate for removal of the disease at an earlier date; and, further, the risk of serious laceration of the diseased cervix is less than in labour at term. But, on the other hand, the danger to the child is very great: an immature child nearly always perishes during birth when the os is rigid from organic disease. In the case under consideration there was little to be gained by premature labour, as the patient was nearly at full time. Labour at term is full of dangers both for the mother and child. The cervix is nearly always torn, sometimes severely, and in consequence there is considerable risk from septic infection and very rapid extension of the disease to the raw surfaces. The child is nearly always stillborn, and craniotomy is frequently necessary. When we consider the relative advantages of the different methods of delivery by abdominal section the choice lies between Cæsarean section and Porro's operation: total extirpation of the uterus is too heroic a measure for patients already weakened by malignant disease. The ordinary Porro's operation has the disadvantage that the stump of the uterus left behind becomes firmly adherent to parietal peritoneum and other structures. The method of operating which I adopted, and which I had previously seen employed with success by Dr. Sinclair of Manchester in a case of pregnancy with pelvic contraction (and which I have lately carried out with success in a case of pregnancy complicated by a huge uterine fibroid), seemed to me to have certain advantages over Cæsarean section. By primary ligature of the uterine arteries or their main branches the blood-supply to the diseased cervix is greatly diminished, and it was hoped that this would retard the progress of the disease; the small stump left after the operation could be easily removed at an early date, provided that the patient survived the first ordeal. Unfortunately, events proved that the patient was not possessed of sufficient vitality to withstand the strain of a major operation. One life has, however, been saved, which almost certainly would have been sacrificed if the patient had been delivered through the natural passages.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Arthrectomy of Elbow-joint and Ankle-joint.

AN ordinary meeting of this society was held on Dec. 12th, Dr. CHURCH, vice-president, being in the chair.

Mr. H. H. CLUTTON read a paper on Arthrectomy of the Elbow-joint and Ankle-joint. Arthrectomy of the elbow-joint was advocated as an early operation in place of a late excision. If the cartilages were not extensively diseased a movable joint might be anticipated. This had been obtained in all the cases in which it was expected without any passive movement, which was not employed in any of the cases. He recorded nine cases which represented his entire experience of arthrectomy as applied to the elbow-joint. The first two elbow-joints became ankylosed for reasons stated in the history of each case, but the patients obtained very serviceable arms. Six resulted in more or less movement in the elbow-joint with cessation of the disease. In the ninth and last case the joint was subsequently excised. An opinion was expressed that passive movement was not now desirable if the wound followed an aseptic course, that

mobility would be established by the patient's own efforts if it was to be obtained at all, and that excision might follow at a later date if it was required. Every ankle-joint since 1887 which had required operative treatment at Mr. Clutton's hands had been submitted to arthrectomy. They were six in number: 1. A boy aged nine years, 1887. Now standing and walking thirteen hours a day as a hosier's assistant. 2. A boy aged three years, 1887. Scarlet fever followed. The patient was lost sight of. 3. A boy aged seven years, 1889. Now walking without lameness, and with some movement in ankle or tarsal joints. 4 A girl aged two years, 1889 Last seen in June, 1890, when the wounds were healed and the foot was free from disease. 5. A girl aged six years, 1890. Now walking without lameness and with some movement in ankle. 6. A girl aged six years, 1890 Now walking, but with some slight displacement of foot; no disease. Two other cases of partial operation were mentioned. The important point in treatment appeared to be the use of a knee-rest for at least a year after operation. In Mr. Clutton's opinion an effort should always be made to preserve the foot whenever an operation was imperatively needed, for an amputation could still be done if the first operation was unsuccessful.

Mr. ARBUTHNOT LANE congratulated Mr. Clutton upon the excellent results he had obtained. He said that he could not understand what principles at the present time would guide a surgeon to perform excision in children, for it was quite exceptional for erasion not to succeed. It was essential to open the joint most thoroughly, and to remove the diseased tissues very completely. After that a tube was kept in for twenty-four hours and firm pressure was applied in order to keep the operation wound dry. Every piece of diseased bone should be removed, and all the cavities left must be plugged with sterilised iodoform. If the tuberculous disease was very extensive he introduced sterilised sulphur after thoroughly scraping, closed the wound for forty-eight hours, then reopened it, removed any sulphur and sloughs formed thereby, and after irrigation closed it again. At the knee Mr Clutton freely opened the joint and removed bone if necessary. Why did not he also do this at the ankle, instead of being contented to make four holes and work with a spoon in the dark? In cases in which small holes existed in the bone they could not be seen or felt unless the opening were free. The method he himself had advocated was not really a very severe one, and he had found recently that if the tendo Achillis was also divided a much more satisfactory view of the interior of the joint was obtained.

Mr. BOWLBY said that it was an advantage to see these cases free from disease some time after the operation. A similar method of procedure to that adopted by Mr. Clutton was successful where the tarsal bones were also affected and he quoted three cases in confirmation of this. It was necessary to keep these patients off their feet for a year at least after the operation.

Mr. KEETLEY, after condemning the use of the word "arthrectomy" as applied to this operative procedure, said that he commonly operated by a semilunar incision round the inner malleolus, combined with a longitudinal incision in front of the outer malleolus. In order to obtain a good view of the joint it was necessary to sacrifice the whole or the greater part of the astragalus and be most economical about the tibia, though in some cases the disease was almost confined to the latter bone. Better results in the long run were obtained by operating on the ankle-joint as soon as possible. It was a barbarous treatment to try to obtain early movement after arthrectomy by means of passive motion of the elbow-joint, and at the ankle-joint firmness was what was wanted. He did not think that the knee-rest was necessary, but plaster-of-Paris and crutches for a time were essential. He was quite convinced that success in these joint cases was greatly enhanced by the use of iodoform.

Mr. BARKER had found the incisions used by Mr. Clutton perfectly adequate for removal of diseased tissues from the elbow and ankle. With the four incisions the whole of the ankle could be overhauled to the fullest extent. The incisions should be made long enough and the flaps well drawn aside. In many cases he had operated through two incisions as practised by Mr. Keetley, and he thought that the transverse incision advocated by Mr. Lane should be avoided if possible. This method of dealing with the joint could also be extended to those cases in which the disease had extended to the tarsal bones. The complete removal of the astragalus for disease was a very satisfactory operation, and the ultimate result was a good one, there being but small alteration of the shape and function of the foot. The whole point of the procedure turned on the complete removal of the diseased tissues, and there was no doubt that iodoform had most materially advanced the success met with in practice. As to subsequent treatment, he questioned whether a kneeling-pin was necessary, and he thought that plaster and crutches were more satisfactory.

Mr. WATSON CHEYNE held that Mr. Lane was quite right in his statement that arthrectomy was the proper operation in children. If the first operation were complete there should be no necessity for further operative procedures or for the use of iodoform. The imperfection of the method lay in the small openings made and in scraping. It was impossible to adequately remove diseased synovial membrane by scraping; it must be cut cleanly out and the incisions should be so planned that this could be accomplished. In the elbow the H-shaped incision with transverse division of the olecranon was advisable, and in the ankle he supported Mr. Lane in advocating a freer opening. His method was to deliberately excise the astragalus, for that bone was more often diseased than any other part of the joint. He made a long vertical incision along the front of each malleolus through which he could turn out the ends of the tibia and fibula, and dissect away the whole synovial membrane.

Mr. CLUTTON, in reply, agreed that arthrectomy was always preferable to excision. He had twice this year performed the operation advocated by Mr. Lane, but he thought, on the whole, that the multiple incisions were quite as satisfactory. In one of the ankle-joint cases he had removed the major portion of the tarsus as well. His object was to emphasise the facts that for tuberculous disease of the ankle Syme's amputation was not the best treatment, nor was excision the most suitable treatment for a tuberculous elbow, though these procedures were still recommended by many surgeons and in the leading text-books. As to the method of operating, he was not in favour of any one plan, but believed that the best operation was that which enabled the surgeon most effectively to remove the disease In after-treatment he held most strongly that passive movement at the elbow-joint ought not to be attempted at all, and if this were generally insisted on it would save a vast amount of suffering to the patients. He had never used iodoform for these cases, and if the surgeon were really clean in his methods it was not required. He had had no recurrence in the ankle-joint cases, in spite of not being able to see all that he had removed. He did not admit the necessity to excise the whole astragalus; removal of the malleolar surface was sufficient to expose any disease in the bone and give a good view of the joint. The use of the knee-rest was not only comfortable to the patient but also necessitated a later visit before discarding it.

CLINICAL SOCIETY OF LONDON.

Osteo-arthritis with Fibroid Nodules.—Recurrent Venous Thrombosis.—Endemic Hæmaturia.—Empyema with Permanent Pulmonary Collapse.

AN ordinary meeting of this Society was held on Dec. 8th, Mr. HULKE, President, being in the chair.

Dr. NEWTON PITT read a paper on four cases of Osteo-arthritis with Fibroid Nodules. In one case there was also extensive fibrinous exudation with peripheral asphyxia. Attention was drawn to references, scattered through recent medical literature, of cases of osteo-arthritis with subcutaneous nodules occurring independently of acute rheumatism, and cases of extensive fibro-gelatinous deposits. Nodules were characterised by the presence of organising connective tissue, with evidence of irritation as shown by cell infiltration extending for some distance around and by the presence of endarteritis in the neighbouring arterioles. The widespread existence of such a condition sufficiently accounted for the peripheral asphyxia. The following conclusions were formulated. Fibroid nodules might occur in connexion with osteo-arthritis. They presented the same physical characters and probably a similar microscopical structure to those found with acute rheumatism in children, but they differed in the following points: 1. They occurred in adults. 2. They were much more chronic, and lasted for months or years. 3. They were at times extremely painful and tender, and the painful state might recur time after time. 4. They were unassociated with any cardiac lesion. 5. They might be of the size of small shot, but occasionally might

measure as much as an inch in diameter.—Dr. ORD congratulated Dr. Newton Pitt on having attacked the question from an open and philosophical point of view, having assumed very little and yet having taken so large a purview. It was wise to include both acute arthritis and osteo-arthritis when discussing the subject of the occurrence of nodules in connexion with joint trouble. It was true that the nodules were usually associated with acute rheumatism, but apart from its clinical history it was not yet known what was the essence of that disease. There was great variety in these nodules in point of hardness, vascularity, tenderness, and size, and these perhaps corresponded with varieties of influence in their production. Was it not possible that erythema nodosum was a step further in the same direction of nodular development? for the latter affection was frequently associated with acute rheumatism. There was certainly a great tendency to the occurrence of these nodules with all kinds of chronic as well as of acute joint affection. Though alternation had often been noticed, yet sometimes both the joint affection and the nodules developed simultaneously. In some of his own cases in which nodules had developed important disturbances of the circulation had been noted, such as asphyxia of the hands and feet. A further temperate working out of this question might help in the elucidation of what were perhaps kindred phenomena, such as the changes in the fingers and hands seen in Raynaud's disease &c.—Dr. HECTOR MACKENZIE had seen a marked case in the wards of St. Thomas's Hospital. A man aged forty-five years, who for a year had suffered from ordinary rheumatic arthritis, presented on admission to hospital a large crop of nodules about the scalp and on the knuckles; later they developed on the costal cartilages, the ribs, the sacro-iliac joints, the sheath of the rectus abdominis, on the penis and on the scrotum. After death a similar condition was found in the pericardium, as well as some small nodules in the mitral valve and one or two in the kidney. There was no valve disease such as was ordinarily to be found in acute rheumatism. The man had had four attacks of acute rheumatism, but the last of these occurred a long time before his admission to the hospital.—Dr. A. GARROD said that more study was required before the true interpretation of these cases would be arrived at; but it was to be remarked that they occurred in patients at an age at which true rheumatic nodules were almost unknown. In patients more than twenty-five years old suffering from acute rheumatism it was extremely rare to find the nodules which were so common in children. Again, in children with true osteo-arthritis nodules were not met with. The nodules were more liable to be tender and were larger in osteo-arthritis than in acute rheumatism. He was inclined to suspect that these and similar clinical appearances were due to slightly different pathological causes. He would rather give up the idea that nodules were pathognomonic of acute rheumatism than the idea that acute rheumatism and osteo-arthritis were distinct morbid processes.—Mr. R. W. PARKER asked if the nodules which had been examined microscopically were removed from the patient during life.—Dr. NEWTON PITT, in reply, observed that the object of his paper was to insist on the fact that these nodules were not to be considered as pathognomonic of rheumatism. The sections in question were obtained from nodules removed during life from a patient under the care of another observer.

Dr. HANDFORD (Nottingham) described the case of a man aged thirty-seven years, who in two years had suffered from nearly thirty more or less separate attacks of Thrombosis of the Veins of the Legs and Lower Part of the Abdomen. He had syphilis several years ago and two attacks of orchitis recently, but no other severe illness. For some years he had been a good deal out of work and imperfectly fed. In June, 1891, exposure to cold and wet was followed by thrombosis of the femoral veins of both legs. The thrombosis gradually spread up to the iliacs and probably to the lower portion of the vena cava. At a subsequent period there was reason to think that some of the mesenteric veins were affected. His extreme anæmia suggested the possibility of pernicious anæmia, and somewhat later the persistent pelvic pain caused a careful search to be made for a pelvic tumour. Neither view proved to be correct. He gradually improved under treatment, mainly by arsenic and iron, and the œdema of the legs diminished; but the superficial veins of the abdominal wall increased in size to nearly that of the little finger, became very tortuous, and anastomosed with those of the chest. The current in them was distinctly upwards, showing that the block was in the portal vein and that the calibre of the affected veins had not been restored. From this date onwards to the present time every two or three weeks, or oftener, one of the small superficial veins of the legs or the lower part of the abdomen became blocked or inflamed. The attacks were quite typical, ran a course of a week or ten days, and ended in resolution. The cause of these persistent attacks was very obscure. They came on without any injury, and when he was confined to bed just as readily as when he was going about. He had no disease of the heart or kidneys. There was no suspicion of gout, and there was no evidence of arterio-sclerosis or of phlebo-sclerosis. He had seemed to benefit most by the administration of mercury and iodide of potassium. As to the cause of the persistent recurrence, Dr. Handford made the following suggestions. 1. That the primary attack was due to exposure following starvation and anæmia, and the subsequent ones to venous stagnation owing to the calibre of the main venous trunks not being re-established. If this was a correct explanation, thrombosis should be much more frequent after phlegmasia dolens and in varicose veins than it really was. 2. That the thrombosis was due to the syphilitic poison. 3. That during the primary attack the lymph channels were blocked as well as the main veins, and subsequently the lymph and waste products were taken up directly by the venous radicles. The late Dr. Wooldridge showed that the injection of lymph or chyle into the blood was followed by intra-vascular clotting.—Mr. W. G. SPENCER quoted some experiments by Dr. Wooldridge on tissue albumen obtained from the testes, which, being injected into the blood, produced multiple coagula. He pointed out as, at any rate, a curious coincidence that, in the case related by Dr. Handford, there was disease of the testicle. Sir Joseph Fayrer had mentioned the possible connexion between the products of broken-down cells and pulmonary thrombosis, and Professor Wright of Netley had shown that when tissue-fibrinogen was injected into the blood a more rapid coagulation would occur when the blood flow was slow or stopped. Professor Halliburton had called this material nucleo-albumen.—Dr. HERRINGHAM said that no question was more difficult to understand than this, and no affection more difficult to treat. He asked whether the changes started in the blood or in the tissues. He had met with it in three classes of cases—after pneumonia, in weakly girls, and in gouty people. In the first two instances the process did not appear to be started in the bloodvessels, except in the cases where there was obvious obstruction; but in the gouty cases it might originate either in the blood or in the bloodvessels. He referred to the case of a man who had suffered from acute pneumonia, in whom almost every superficial vein became blocked. The whole of the thromboses occurred in the course of one attack, although they were not precisely simultaneous in their onset.—Dr. HANDFORD, in reply, said that there was no indication pointing to gout in his case.

Dr. HANDFORD also gave an account of a case of Endemic Hæmaturia due to Bilharzia, upon which he had reported four years ago. The patient was robust and in good health, but still passed a little blood occasionally at the end of micturition, and the ova of the bilharzia hæmatobia were still to be found in small numbers and contained living embryos. The patient had tired of medication and for some time past had taken no remedies, so the disease was now running its natural course. He had spent the past four years chiefly in England, but partly in the northern portions of the United States of America, where, according to Dr Osler, the bilharzia was not found. There was, therefore, no possibility of reinfection, since he left the Cape eight years ago. Consequently, unless reproduction of the parasite takes place within the body without the intervention of any intermediate host, the adult parasites must now have reached the age of over eight years—a very advanced age for such lowly organised animals. Dr. Prospero Sonsino of Pisa stated as follows: "Its life history was less complicated than that of the digenetic trematodes; it required an intermediate host and underwent a metamorphosis, but there was no alternation of nor asexual generation. Several kinds of aquatic arthropora might act as efficient intermediate hosts. The larval phase of the bilharzia found encapsuled in the intermediate host was, in a biological sense, different from the encysted corcaria phase of the typical distomes, insomuch as it was a direct encystment of the embryo, and not, as in the case of the corcaria of the distomes, the encystment of the asexually generated progeny of a redia developed from an embryo distome." Either the duration of the life of the para-

site was much greater than was supposed or direct reproduction must sometimes occur without the intervention of an intermediate host. Might not the encysted stage be passed through and development be completed within the body of the original host? Might not the ova be deposited in the veins of the pelvis? Might not some of the ova find their way into the tissues, pass through the encysed stage there, and then reach the veins of the portal system to complete their development? So the vicious circle would be completed.

Mr. W. G. SPENCER then described the case of a man in whom the whole left pleural cavity had become involved in an Empyema. The onset of the disease had passed unnoticed, but it was probably of the chronic tuberculous type, the patient being predisposed to it by his work as an engineer in hot stokeholes, by attacks of ague and enteric fever in India ten years before, and by an attack of pneumonia four years before. This view was supported by the fact that stationary fibroid tubercles were found in the other lung. The left lung appeared to have collapsed permanently before the first incision was made. He was treated for six months by small valvular openings, from which a large amount of pus—perhaps between one and two pints—escaped daily, mainly at the two dressings. When the patient came under Mr. Spencer's care he was so weak that he could not sit up in bed unaided, and would scarcely have lived for more than another fortnight. The measures adopted produced such an improvement that he lived for nearly a year. At first a free opening was made by removing ribs, from the seventh to the eleventh, and a month later from the third to the sixth, followed by the injection of iodoform emulsion daily. He improved so much that he was able to walk out of doors for two hours, but in four months the progress came to a standstill on account of the profuse discharge. He felt then so much better that he refused a further operation which was urged, but in two months he returned to the hospital as weak as when first seen. Six months after the first operation the ribs and pleura were further removed from the second to the eleventh ribs, in front along a line just outside the cartilages; externally and behind as far as could be reached by retracting the scapula, and below the scapula to within one or two inches of the transverse processes of the vertebræ. The cavity was then filled daily with cyanide gauze steeped in iodoform emulsion, by which means the purulent discharge was reduced to a very small amount. He could again walk in the open air and went to a convalescent home. There, during the hot weather, he was suddenly attacked by acute and fatal diarrhœa. The cavity had been reduced to much less than half the opposite pleural cavity; but the remaining parts of the ribs covered by the scapula and its muscles stood rigidly out from the spine, not having sunk downwards and inwards as in the young. During all the course of the case the heart could be seen and touched, hanging almost unsupported in the middle of the thorax.—Mr. PEARCE GOULD said that it was unusual in these cases that a cavity should extend so low down in the pleura below the eleventh rib. The best plan of treatment for chronic empyema was to make one operation and to perform it as completely as possible, for it was only when the entire osseous wall had been removed that the result was good. The best incision was a vertical one, the edges being retracted and the ribs shelled out entire from outside. Another plan was to open the pleura and to work from within. He thought that a very little chloroform was a safer anæsthetic than ether. It was a question whether it was advisable to remove the parietal pleura. In the last case he had treated he left the pleura, so that the parietal layer collapsed against the visceral, and thus adhesions could form early between the two. He considered this to be a better plan than stuffing the cavity.—Mr. BOWLBY related a case of empyema in a patient who was recently under his care. A woman twenty-five years of age complained of pain in the chest which was thought to be neuralgia. Later the breast swelled and a mammary abscess was diagnosed, notwithstanding the fact that a pint and a half of pus were evacuated from it and that matter continued to escape freely afterwards. Subsequently an abscess developed above the episternal notch, a second and third below the ensiform cartilage, a fourth pointed in the axilla, a fifth below the breast, a sixth above the scapula, and a seventh low down in the back posteriorly. On admission to hospital there was a complete undermining of the whole of the left side of the soft tissues of the thorax. He removed a large portion of the ninth rib, evacuated pus from the pleura, and found that the lung had not completely collapsed. The patient rallied and made rapid progress, and further operations were undertaken to cleanse and close the sinuses. She left the hospital last month with all the sinuses soundly healed and the pleura almost completely obliterated, except a small cavity having a capacity of about three drachms. The patient had recovered without a more extensive operation, because the chest walls were more elastic than they would have been in a more elderly person, and because there was not complete pulmonary collapse.—Dr. BURNEY YEO asked Mr. Pearce Gould whether he had noticed in his cases that cardiac or respiratory disturbance persisted after the operation.—Mr. PEARCE GOULD replied that he had recently seen one child five years after operation, and though it was feeble and had practically but one lung it was in a fairly good physical condition.—Mr. W. G. SPENCER, in reply, said that the extremely feeble condition of the patient precluded the possibility of performing a complete operation at the first attempt. He opened the pleura as low as the eleventh rib because an incision already existed there and because he found the diaphragm presented a saucer-like concavity instead of a convexity. He excised the ribs by making an oblique incision down the chest wall and retracted the edges of the wound without raising flaps. The heart protruded through the wound and had to be kept back with the hand while he cut away each rib together with the pleura which covered it. He was able accurately to observe the cardiac contraction, and he confirmed Harvey's observation that the heart erected itself in systole and rose so as to occupy a more horizontal position in the chest.

MEDICAL SOCIETY OF LONDON.

Specimen of Leg after Mikulicz's Operation.—Amputation of Foot by Syme's Operation.—A Series of Fifty Ovariotomies.

AN ordinary meeting of this Society was held on Dec. 11th, Mr. F. TREVES, Vice-President, being in the chair.

Mr. BLAND SUTTON exhibited the Skeleton of a Leg three years after the performance of Mikulicz's Operation. The patient, a girl eighteen years of age, had been lame since infancy on account of infantile paralysis, and in June, 1890, Sir William MacCormac endeavoured to make the defective leg effective by producing an artificial pes equinus according to the plan laid down by Mikulicz. An examination of the specimen (see Fig.)

showed that the intention of the surgeon had been anatomically fulfilled, the freshened surfaces of the scaphoid and cuboid

having become firmly ankylosed to the cut surfaces of the tibia and fibula. The disposition of the toes was interesting, for instead of lying in the same plane as the metatarsals, they were at right angles to them, and the first phalanges had fashioned for themselves new articular facets on the dorsal aspects of the heads of the metatarsals. In order to render this clear in the drawing the first metatarsal is sketched separately and of natural size. In spite of the success of the operation the foot was of little service in progression, as it caused the girl much pain and inconvenience, and the skill of the surgical mechanician being unavailing, Mr. Sutton removed the leg in September last by amputating through the knee-joint. The specimen, as far he was aware, was the only skeleton of a leg after Mikulicz's operation existing in London.

Mr. KEETLEY showed a boy who had suffered from a severe crush of the foot, on whom he felt inclined to attempt Mikulicz's operation, but found that there was not sufficient tissue, owing to extensive damage to the skin. He had, therefore, to amputate in the position of a Syme's operation, and he used the tissues over the ball of the toe to cover the end of the stump, preserving a bridge of tissue containing the plantar vessels to nourish the preserved skin. It was now more than five years since the operation, and a sound stump had resulted.

Dr. HERBERT SPENCER read a paper giving the results of a First Series of Fifty Ovariotomies: a Plea for the Performance of Ovariotomy by Obstetric Physicians. The paper is published in full at p. 1503 of our present issue.—Surgeon-Major BLACK said that many years ago he remembered witnessing the early cases of Mr. Clay of Manchester, and he saw the first operations of the kind that were performed in Dublin.—Dr. ROUTH defended the special hospitals from the attack which he considered had been made on them by Dr. Spencer. He said that before the special hospitals were established the mortality from these operations at the general hospitals was excessive. He agreed that the whole number of cases in an operator's practice should be recorded. He concurred also in the view that tapping should not usually be done, though he held that aspiration was safe and without danger, and it gave a useful clue to the nature of the case, and operation might then be proceeded with, if necessary, immediately afterwards. In certain cases it was necessary to flush, especially where the pus was putrid.—Mr. PEARCE GOULD said that if there was one class to whom gynæcologists owed most it was to the surgeons and to no man more than to Sir Joseph Lister. Dr. Spencer had appealed to the surgeons to give up an interesting class of cases to the gynæcologists, and though at first he was almost convinced by the arguments adduced he had yet some lingering doubts as to its advisability. With the exception of the skull, there was no cavity like the abdomen for furnishing errors of diagnosis, and with the advance of abdominal surgery there was no doubt that abdominal diagnosis had receded. He held strongly that any surgeon who operated on the abdominal cavity should be prepared to deal with any condition there met with, and the experience furnished by easy cases of ovariotomy enabled surgeons to deal with greater skill and confidence with the more difficult cases of abdominal trouble in which more complicated, difficult, and dangerous operations were necessary. He was present as an onlooker at an operation performed by a distinguished gynæcological physician. The case was diagnosed as ovarian, but was found to be renal, and the operation was successfully completed by the obstetric physician. During the present year he had seen a patient in consultation with a gynæcological physician, who thought that the case was not one in his province to deal with. He himself performed the operation and found an ovarian tumour with a twisted pedicle, and it would have been ludicrous in either of these operations had the operator stopped because the tumour was out of his province, and handed the scalpel over to his colleague. He thought, on the whole, that the plan now adopted at Middlesex Hospital was the wisest—the gynæcological physicians operating on the cases which came to them, while the surgeons had the option of themselves operating on any such cases sent to their wards.—Dr. WILLIAM DUNCAN said that there was no doubt in some cases that incomplete operations must be done. In two cases in his own practice he had found ovarian cysts embedded in cellulitic inflammation which could not be removed, so he tapped and drained them, with good results. Some few years ago he had a series of cases in which suppuration occurred in the stitch-tracks, but this trouble disappeared when he personally superintended the boiling and carbolising of the ligatures. As to drainage, where there had been very extensive adhesions he had used a tube for twenty-four or forty-eight hours, and without injurious effect, save in one case in which a portion of omentum, becoming entangled in the holes of the drainage-tube, was drawn up into the lips of the wound, and thus gave rise to internal strangulation, which proved fatal. Where any pus had escaped from the cyst it was wisest to flush out the abdominal cavity with warm boric acid solution. He paid but little regard to the temperature as long as the pulse kept under 100. After operation he refrained from giving food for twenty-four hours, except a teaspoonful of hot water every hour or two, and where vomiting or retching was persistent he gave half a pint or a pint of hot water with benefit. He held that the whole process of obstetrics was surgery and not medicine; that those who practised the art of obstetrics should be called surgeons and not physicians; and he concluded by saying that Dr. Spencer had made out a good case for the performance of these operations in a general hospital by one of the surgeons or by the obstetric physician.—Mr. HARRISON CRIPPS held that among students of medicine there were two distinct attitudes of mind. There was the energetic, active man, on the one hand, who tended towards surgery, and there was the learned and diligent man, on the other hand, who waited for results and who ultimately became a physician. If it were attempted to amalgamate these two distinct classes of mind, the best qualities of both would be spoiled. If the obstetric physician wished to operate, let him be trained as a surgeon and learn how to deal with other abdominal tumours. Any man who undertook to open the abdomen should be competent to deal with every condition he would be likely to meet with in the best possible manner. He thought that there was quite room for a further division of obstetric physicians in London into those who operated and those who did not, and he himself had met with cases in which he preferred to meet in consultation an obstetric physician who did not perform abdominal sections.—Dr. PLAYFAIR remarked that the history of the practice of operating on abdominal tumours by obstetric physicians in London was very peculiar. The whole of obstetric practice was certainly more surgical than medical. Dr. Tyler Smith was among the first of the obstetric physicians to operate. He himself had witnessed such disappointing results in these cases when they had been left in the hands of general surgeons that he preferred to place ovarian cases under operative treatment by obstetric physicians, who had benefited as much as their purely surgical brethren by the introduction of the Listerian system, and his own results would compare favourably with those in the paper under discussion. It was certainly the view of enlightened Fellows of the Royal College of Physicians that the obstetric physicians should be allowed to do necessary operations. For the last three years he had closed the abdominal wound by layers of buried sutures, and he had not seen or heard of any hernial protrusion among his patients since he had adopted that practice. He was certain that drainage-tubes were frequently used when they were quite unnecessary. He had employed flushing in certain cases in which it seemed to be indicated with beneficial results.—Dr. SPENCER, in reply, said that it was never justifiable to aspirate for purposes of diagnosis, for the fluid withdrawn could not be identified microscopically, and it was often too viscid to flow through a small cannula. The dangers were not from sepsis, for that could be guarded against by cleanliness, but there might be hæmorrhage; and papillomata or malignant disease might be disseminated. It was only in the very rarest circumstances that treatment by tapping was justifiable, such as in the presence of acute pneumonia or of typhoid fever. He held that it was not frequent that mistakes were made between pelvic tumours and those that arose in the abdomen higher up, and he said that incomplete cases would not often occur in skilful hands. It would be worth while to inquire how often hernia followed the use of a drainage-tube, but operators could not expect to hear of the after-occurrence of hernia unless they inquired especially for it.

OTHER METROPOLITAN MEDICAL SOCIETIES.

SOCIETY OF ANÆSTHETISTS.—At the first ordinary meeting of this Society, held at 20, Hanover-square, W., on Nov. 16th, the President, Mr. F. WOODHOUSE BRAINE, in the chair, Dr. GEORGE OLIVER, of Harrogate, communicated the results of some preliminary observations he had made on the size of

the radial artery under various anæsthetics, as measured by means of an instrument specially devised by him for that purpose. The measurements collected so far showed that the radial diameter was independent of the frequency of the pulse. It was increased under ether and much and suddenly diminished under chloroform. With nitrous oxide there was at first a rise and then a corresponding fall; when oxygen was inhaled together with the nitrous oxide in the manner suggested by Dr. Hewitt the radial diameter rose and did not subsequently fall. When chloroform was preceded by ether or a mixture containing that drug the reduction in the size of the artery was checked, or there might even be a slight rise. In the same way, with A.C.E. mixture alone the diminution was very much less than with chloroform alone. The alterations in the radial measurements due to ether, nitrous oxide gas and ether, and the A.C.E. mixture did not exceed the normal variations observed in healthy individuals. On the other hand, the depletion of the arteries caused by chloroform was considerably below the normal. He thought that with ether alone the size of the arteries might favour cerebral and pulmonary hæmorrhage, and on that account he preferred the A.C.E. mixture as a routine anæsthetic.—The PRESIDENT had been administering ether for a good many years, and had certainly not seen at the most more than four cases of pulmonary bleeding following its use.—Dr. DUDLEY BUXTON said that, although the arterial diameter might not be an exact measure of the blood pressure, Dr. Oliver's instrument might be of much service in investigating those vaso-motorial changes upon which variations in blood pressure were dependent. He thought that the problem of change in the arterial diameter under anæsthetics was a very complicated one, and many more observations would have to be made before definite and practical conclusions could be drawn. He was much struck by the effects apparently produced by change in the anæsthetic in the course of a single administration, as it was commonly believed that such changes were inadvisable.—Dr. SILK did not quite understand what relation these observations bore to intra-vascular blood-pressure. He had been in the habit of changing from one anæsthetic to another, but had never seen any ill-effects follow the proceeding.—Mr. TYRRELL did not think there was any danger in a practised anæsthetist changing the anæsthetic, provided that the change was not too sudden and that the air was not rigidly excluded; in hospital work, however, beginners were very apt to neglect these precautions. He was now working with mixtures of the vapours of ether and chloroform, and hoped to communicate his results at a future date. He felt sure that he had not seen such sudden and complete diminution in the size of the vessels under chloroform as recorded by Dr. Oliver.—Mr. GRANT-MORRIS thought that the nature of the operation and the general condition of the patient as regarded shock, loss of blood, &c. might have had something to do with the results obtained.—Dr. HEWITT thought that the stage of the administration at which the observations were made should be known. In many cases of chloroform administration the pulse remained unexpectedly full and soft throughout. He thought that as a general plan the use of chloroform before ether was objectionable, and he preferred to use the A.C.E. mixture as a preliminary to ether. He did not object to the use of chloroform after ether, provided that care was taken to make the change gradually, so that the rapid and deep ethereal respirations did not lead to an overloading of the lungs with chloroform vapour.—In reply, Dr. OLIVER said that his observations had led him to believe that blood-pressure was by no means coincident with radial diameter. He did not think that the severity or prolonged character of the operations accounted for the changes in respect to chloroform, but he had reason to believe that various proceedings, such as cutting, traction &c., quickly affected the readings of his instrument.—At the close of the meeting Dr. OLIVER showed and demonstrated the use of his two instruments, the pulse-pressure gauge and the arterio-meter.

HUNTERIAN SOCIETY.—An ordinary meeting of this Society was held at the London Institution on Wednesday, Nov. 22nd, Mr. F. GORDON BROWN, President, in the chair. An unanimous vote of condolence was passed expressing to Lady Clark extreme regret at the irreparable loss she had experienced.—Dr. G. NEWTON PITT read a paper upon the Administration of Oxygen for Medicinal Purposes. The notes of a case of pneumothorax, with acute dyspnœa and marked lividity, were read where inhalations of oxygen gave marked relief to the dyspnœa, as well as that of a second case, one of phthisis, where the dyspnœa, which was intense, was relieved by oxygen. He had found oxygen inefficient in a patient aged fifty-five, the subject of chronic Bright's disease, with albuminuric retinitis, and in other cases of uræmic coma. He advised oxygen in convalescence from severe illness, in syncope, in anæmia as an adjuvant to iron and other treatment, in laryngeal diphtheria, and during operations upon the air passages where dyspnœa was experienced. In pneumonia oxygen had a most markedly beneficial effect where the lividity was great.—Dr. FREDERICK TAYLOR had found oxygen beneficial in cases of obstruction of the air passages, in a case of opium poisoning with very slow (eight per minute) respirations. In a case of leucocythæmia Dr. Taylor had never seen such marked benefit from any other treatment. The patient inhaled one cubic foot per diem for two months. In his experience cases of broncho-pneumonia and capillary bronchitis had derived no benefit from the inhalations of oxygen.—Dr. ALLEN said he had met with and published two fatal cases following the administration of oxygen, and advised caution in its use.—Mr. CORNELIUS HANBURY exhibited the apparatus used, and explained the manufacture of ozonised air by Mr. Andreoli's method.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.—A special meeting of this Association was held on Thursday, Nov. 16th, at 10 A.M., at the rooms of the society, 11, Chandos-street, Cavendish-square, under the presidency of Dr. MURRAY LINDSAY, for the purpose of considering the report of the Rules Committee. This report was discussed at the annual meeting held at Buxton last July, but as the new rules had only been in the hands of members for a short time it was decided to further consider them at an adjourned meeting. Various resolutions were adopted. One of the most important ones was the decision to form local divisions of the Association. In future there will be, as soon as the rules are passed, four divisions—two in England, one in Scotland, and one in Ireland. The ordinary meetings of the Association will be held as usual, but in addition there will be branch meetings—one in the north and one in the south of England, besides those in Scotland and Ireland, which have been held for some time. Some discussion arose as to whether duly qualified women should be admitted members of the Association, and it was finally resolved to admit them. It was decided that the officers, with the exception of the divisional secretaries, should be nominated by the council as hitherto, but the vacancies on the council will be filled by the votes of the general body of members. The proposed rules were gone through *seriatim*, and various matters were referred to the Rules Committee, which was reappointed, to carry into effect. In the afternoon seven candidates were elected members of the Association, and an amended resolution of Dr. Campbell was adopted. It was to the effect that the grant of 4*s.* per week at present made to the authorities liable for the maintenance of pauper lunatics in county and borough asylums, registered hospitals, and licensed houses should also be made to such authorities towards the maintenance of pauper lunatics placed in workhouses under the provision of Section 25 of the Lunacy Act (1890). It was resolved that the general secretary should send this resolution to the President of the Local Government Board and to the Commissioners in Lunacy, asking them to assist in carrying it into effect.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—A clinical evening of this Society was held on Dec. 1st, when the President, Dr. DONALD HOOD, read the notes of a case of Glanders which proved fatal in ten days; no history of injury was obtainable. The arms were first affected, but there were no papules until three days before death. The nose and lungs were extensively affected, also the right forearm.—Mr. SIMS then brought forward a case of Scleroderma Diffusa, in which the patient had been treated with massage and glycerine and was improving.—Dr. DOCKRELL described a similar case in which a point of interest was the presence of a circumscribed patch on the neck.—Mr. S. PAGET related a case of Traumatic Cephalhydrocele in a child after a slight injury.—Dr. P. S. ABRAHAM brought forward a case of Bromide Rash, also a case of Rupia which had existed since the secondary symptoms developed over two years ago, with early keloid showing itself.—Mr. STEER gave the details of a case of Raynaud's Disease. The right hand was first affected, then the left, and afterwards the toes and ears; on the hands there were depressed scars, due to blisters of idiopathic origin; the hands and feet were greatly deformed, due to absorption of the phalanges.—Dr. SEYMOUR TAYLOR said that he felt

inclined to agree with those who considered the pathology of this disease to be due to arterial spasm, and gave as an anatomical reason for the comparative immunity of the thumb and little finger their superior blood-supply.—Dr. MAY considered it to be due to scleroderma, as also did Dr. F. SAVERY.—Drs. CLEMOW, BALL, DOCKRELL and ABRAHAM and Mr. PAGET also took part in the discussion.—Mr. BIDWELL related a case of Ostitis of the Humerus and three cases after excision of Lupus and Grafting by Thiresch's method.—Mr. S. PAGET gave the particulars of a case of Ankylosis of the Spine after injury, and subsequent treatment by jury mast; the patient also had a general enlargement of the foot.—Mr. KEETLEY referred to the predisposition of some patients to ankylosis.—Mr. SWINFORD EDWARDS brought under notice a Cysto-sarcoma of the Sacrum of rapid growth.—Finally Dr. DOCKRELL brought forward a case of Lupus Erythematosus, also the sister of the patient, who exhibited a small papule on the cheek, which had taken three years to come to the surface.

PROVINCIAL MEDICAL SOCIETIES.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this Society was held on Tuesday, Dec. 5th, Dr. JOHN APPLEYARD, President, in the chair.—Mr. GODFREY CARTER read notes of a case of Acute Axial Rotation of a Dermoid Cyst. The patient was a woman aged thirty-five years, multipara, with right femoral hernia. A truss could not be worn and, the hernia becoming strangulated, it was reduced under ether. About a year later she had a natural labour, and a few days afterwards, in consequence of a feeling of discomfort, the abdomen was palpated, when a small tumour, freely movable except upwards, was noted, probably a right parovarian cyst. One month after the confinement vomiting, intense pain, and sudden collapse supervened; she was reported to have passed blood and pus at stool. The tumour could not be felt. She was relieved by morphia, but as she did not progress the abdomen was opened by Mr. Mayo Robson a week later, who, passing the hand deep into the right flank, withdrew a long, pedicled gangrenous tumour, which contained hair and teeth. It was easily lifted out of the pelvis, the pedicle being found to be axially twisted one and a half times. The patient made an excellent recovery.—Drs. GOYDER, HORROCKS, MANTLE, and KERR discussed the case.—Dr. HORROCKS showed a specimen from the case of a woman aged thirty-eight years, who was admitted to hospital with symptoms of intestinal obstruction due to a growth in the lower part of the abdominal cavity. A vertical incision was made below the umbilicus, a tumour growing on the intestinal wall was drawn out, and the opening was packed with aseptic cloths. A V-shaped piece of mesentery together with the involved part—three feet and a quarter in length—of intestine was removed. A Paul's decalcified bone tube was inserted in the free end of the bowel of smaller lumen and stitched to its free margin, the other free end being brought into apposition and stitched to this by means of a continuous suture, the bone tube and bowel being then invaginated and fixed in position by a row of continuous sutures. Histologically the growth was a large-celled sarcoma. The end of the vermiform appendix was removed. The patient made an uninterrupted recovery.—Mr. EMERSON read the notes of a case of Typhoid Fever, the main features of which were constipation, free perspiration, and headaches, which were treated with antifebrin. The man appeared to be quite convalescent from the thirtieth to the fortieth days, when a relapse took place with return of the sweating; the temperature on the forty-fifth day had risen to 105° F. About the seventy-fifth day the temperature was again normal and the patient appeared to be quite convalescent; painless œdema of the right leg and thigh developed and persisted, and the curious point is that the pulse-rate remained and still was from 140 to 150.—Drs. JOHNSTON, KERR, HORROCKS, GOYDER, and HONEYBOURNE made remarks on the case.—Mr. MERCER read the notes of a case of Intestinal Obstruction caused by a Gall-stone. A stout woman aged fifty-eight years had two attacks of biliary colic, and after a short time again became ill, suffering from nausea and epigastric uneasiness. When seen on the third day she had a slight icteric tinge; there were continuous pain and great tenderness about the gall-bladder and epigastrium; purgatives and morphia were used, but she got gradually worse, becoming feverish. An operation was decided on, but owing to the passage of flatus and a light-coloured motion it was postponed. On the eighth day, her condition having become critical, the abdomen was opened. A gall-stone about one and a half inches by three-quarters of an inch, non-facetted and rough, was found impacted in the bowel, which was distended above and contracted below. It was removed by a longitudinal incision, but she died on the next day. Drs. JOHNSTON, HORROCKS, APPLEYARD, and MANTLE entered into the discussion.—Specimens: Dr. WHITWELL (Menston Asylum) gave a demonstration of the pathological conditions of the nervous system in insanity and myxœdema, illustrated by numerous macroscopic and microscopic specimens.

MANCHESTER MEDICAL SOCIETY.—A meeting of this Society was held on Wednesday, Nov. 15th, Dr. C. E. GLASCOTT, President, being in the chair.—Dr. LEECH showed a man who had suffered from Tremors on Movement closely simulating those observed in Insular Sclerosis, but which were nevertheless probably of hysterical origin. He had suffered from two attacks, in the first of which the tremors on movement were extremely marked, but at the end of two months they entirely passed away and the patient was able to resume work. In three months the tremors on movement returned, though to a slighter extent; but the man complained of weakness of the lower extremities. For this, after some months, he came into hospital and recovery quickly followed.—Dr. HOLGATE OWEN showed a case of Sporadic Cretinism. The patient, a woman twenty-six years of age, was born in Manchester and had lived there all her life. At birth she was a big, healthy looking child. For twelve months the mother nursed her at the breast. She was backward in learning to walk, and dentition was delayed until the latter half of the second year. Nothing wrong was noticed by the mother until the child was six years old, when a deformity in the back was observed. She was always shy with other children and very slow in learning anything. About three years ago she began to menstruate. The flow had always been very scanty and irregular in its occurrence. The following notes were taken when she was admitted into the Clinical Hospital for Women and Children, Manchester, on Oct. 27th last: "Her height is 40¼ in.; she weighs 45 lb. Her face has the characteristic appearance of cretinism—broad, flat, with pendulous cheeks, large mouth, and rather flat nose. The skin is harsh, dry, and scaly. The mammæ are slightly prominent and a small amount of gland tissue can be felt. There is marked scoliosis of the spine, with convexity towards the right side, involving the whole of the dorsal vertebræ. The urine is free from albumen and sugar, but contains a very small amount of urea—only sixty-six grains in the twenty-four hours. The temperature is subnormal. No thyroid gland can be felt, nor are there any supra-clavicular swellings." About a week after admission the administration of thyroid extract was commenced, a five-grain tabloid being given daily, and on Nov. 7th this was increased to two tabloids. After the dose of thyroid extract had been doubled a decided change took place. The skin became softer and smoother, the temperature rose to a point generally above normal, and the pulse became much accelerated. On Oct. 22nd the pulse-rate was noted to be 240 a minute. The excretion of urea also very markedly increased. On Nov. 14th this amounted to 316·8 gr. in the twenty-four hours.—Dr. E. S. REYNOLDS showed a case of Right Hemiplegia with Paralysis of Eye Muscles on the Left Side. The hemiplegia was evidently due to a hæmorrhage in the left internal capsule. The paralysis of the eye muscles affected the left external rectus, the superior and inferior recti, and the oblique muscles, but not the internal rectus; there was also loss of contraction of the iris to light and accommodation, the left pupil being dilated. There was very marked associated loss of movements of both upper and lower eyelids when the patient attempted to look up or down. The lesion was probably in isolated branches of the third and sixth nerves, being most likely a syphilitic infiltration; for although no history of syphilis could be obtained this was the only explanation of the multiple brain and nerve paralyses. There was no optic neuritis or kidney disease.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—A clinical evening was held on Friday, Dec. 1st, Mr. MACGAVIN, President, in the chair.—Mr. PRIOR PURVIS read notes of, and showed microscopical sections from, a case of Extensive Sarcomatous Infiltration of the Posterior Wall of the Bladder.—Dr. EZARD read notes of a case of Rhinolith and showed a specimen.—Dr. HENRY exhibited a woman who had suffered from Myxœdema with all its characteristic symptoms, and whom he had successfully treated with

thyroid extract.—Mr. MACGAVIN read notes of, and showed a specimen from, a case of Uterine Polypus.—Mr. THOMAS MOORE exhibited a specimen of Gangrenous Bowel from a Strangulated Femoral Hernia.—Mr. JOHN POLAND showed the following specimens: (1) Tuberculous Epididymitis of Child; (2) Amputation through Knee-joint; and (3) Complete Necrosis of Astragalus.—Dr. PATRICK SCOTT showed the Kidneys, Heart, Liver, and Spleen from a patient who had died from contracted granular kidney.—Mr. ROCK exhibited the following specimens: (1) Tuberculous Abscess of both Apices of the Lungs, healed in one apex; and (2) Suppurative Phlebitis of Internal Iliac Vein.—Mr. W. P. PURVIS brought forward several microscopical sections showing Cell Inclusion in Carcinoma.—Dr. ERNEST CLARKE read notes and showed a section of Pseudo-glioma of the Eye of a Child four years of age.

Reviews and Notices of Books.

Various Forms of Hysterical or Functional Paralysis. By H. CHARLTON BASTIAN, M.A., M.D., F.R.S. London: H. K. Lewis. 1893.

DR. BASTIAN has made some additions to the lectures which were published in THE LANCET in 1891,[1] and has included some addresses which have appeared elsewhere to make up the volume which is the subject of this notice. The book essentially consists of a series of careful clinical records of cases of so-called functional or hysterical paralysis; but the most interesting part of the treatise, and perhaps the only part that is controversial, will be found in the deductions which the author draws from a consideration of those records and the consequent classification of functional paralysis which he formulates. Cases of functional paralysis he divides into those of cerebral type and those of spinal type. In the former he considers that there are different varieties according as they are to be considered as a result of defective functional activity in the Rolandic area, in the posterior third of the hinder segment of the internal capsule, in both of these areas, or finally in the outgoing fibres from the Rolandic convolutions. The cases of spinal type are divided into a spastic variety in which the defect of function is supposed to be in the pyramidal system of fibres, and a flaccid variety in which a functional defect is postulated in the anterior horns of the cord.

The question of functional disease is a very difficult one apart even from the initial difficulty in regard to the name that confronts us. Every disease is of course functional in the sense that diseased structure is manifested by disturbed or disordered function. In regard to the diseases under discussion the term is frequently, if not commonly, used as synonymous with hysterical, and, so far as we can gather, by that is meant some obscure condition in which the function of certain structures is in abeyance, either voluntary or involuntary. Dr. Bastian, however, does not claim that those cases have no actual, possibly detectable change if an opportunity offered. He even supposes that in certain cases there may be a thrombosis which resolves, or a vaso-motor spasm which subsides, or some other more obscure condition compatible with paralysis for months, and yet leaving no trace behind it of altered or disordered function.

We must admire the completeness of the classification. It would be difficult to find a case which could not be pigeonholed into one of the author's divisions. If one were not sufficient additional room could always be borrowed in a neighbouring one. In the nature of the case it is impossible for anyone to say that the classification is incorrect, and at least it can be said to be suggestive. One point we would venture to doubt, and that is whether bedsores are ever present in a functional case. The only case we have noticed in Dr. Bastian's list in which bedsores were present is one regarding which, especially as recovery has not taken place, there may legitimately be more than one opinion, and we venture to think that it is no proof of the possible occurrence of bedsores in functional disease.

As we have already said, the book is suggestive if not convincing. The subject is one upon which most theories must as yet be regarded as only slightly helpful towards complete elucidation. We venture to think that the clearness and definiteness with which Dr. Bastian has conceived and stated his views on this subject in the treatise before us will render him all the more receptive of whatever fresh light the immediate future may have in store for us.

[1] THE LANCET, Oct. 10th, 1891.

A Manual of Medical Treatment or Clinical Therapeutics. By I. BURNEY YEO, M.D., F.R.C.P. Two vols. London: Cassell and Co. 1893.

ALTHOUGH the literature of therapeutics is varied and extensive, and the general principles of the treatment of diseases are discussed with more or less fulness in every text-book of medicine, yet there is ample room for such a manual as the present by one who is well entitled to write on the subject. For one thing, Dr. Yeo has dealt with the treatment of disease not, as is ordinarily the case, in the form of an appendix to a disquisition on the sources and physiological actions of remedies, but in its more rational and instructive place—namely, after an exposition of the diseases themselves. The plan of the work, then, is one with which we are not very familiar in this country, although it has been followed, with perhaps less precision and completeness, in the writings of Milner Fothergill, Whitla, and S. Fenwick. Dr. Yeo has written, in fact, a medical text-book in which the converse method to that usually adopted has been followed. His aim being to give prominence to therapeutics, he condenses his remarks upon etiology and pathology, although devoting to them sufficient attention to give point to the main topic of treatment.

The work is divided into sections, commencing with the diseases of the organs of digestion and passing in turn through the various systems, leaving to the final section the discussion of the specific infective diseases. We have carefully perused its pages and can highly commend the book as being very practical and useful. It seems to us that Dr. Yeo has well succeeded in his aim—namely, to produce a work which shall embody all that is trustworthy and valuable in treatment, whilst discussing with impartiality and acumen matters which are more or less subjects of controversy. Each chapter has, further, an appendix of formulæ, so that to the practitioner there is ample scope given for his selection of remedial agents. It may of course be objected that the tendency of modern medicine is rather in the direction of the limitation of drug treatment, but this scepticism may be carried too far. Certainly no one can reproach the author of this book with any such views, and we need only point to his advocacy of quinine in the treatment of acute pneumonia as an instance that he at any rate is firm in his confidence of the powers of drugs. It would, however, be invidious to select any part of the work for criticism without regard to the general tenor of it, and since there is so much room for individual opinion on every part of the subject we refrain from doing so; but we may well congratulate the author on having written a book which deserves, and will doubtless command, a wide circle of readers, who will appreciate its value and utility.

Der Bau des Menschen als Zeugniss für seine Vergangenheit. Von Dr. R. WIEDERSHEIM. Zweite Auflage. (*The Construction of Man as a Testimony of his Past.* By Dr. R. WIEDERSHEIM. Second Edition.) Freiburg: Mohr. 1893. Pp. 200.

THIS is an interesting work. It is an endeavour to demonstrate the inadequacy of the teleological or Mosaic view of

anthropogeny by an appeal to morphology and embryology. Each organ is considered in succession, commencing with the integument, including the hair and mammary glands, followed by the bones, muscles, nerves, sense organs, viscera, and respiratory, vascular, and uro-genital systems. In the case of the integument the arrangement of the hair is given in the fœtus, with engravings of the remarkable examples of hairy individuals represented by the Russian dog-man, Andrian Jeftichjew, and Julia Pastrana. Drawings are also given of a hairy Ainu of the north-east coast of Yesso and of a young orang-outang. The first mammals, the author points out, which proceeded from scaly reptiles, were themselves scaly, but presented also sparse hairs behind the scales, the origin of which is at present unknown. The present arrangement of the hairs, he remarks, is alternate, as if they were still situated behind scales. A good section is devoted to polymastia, and several illustrations are given of this condition and numerous cases are recorded. In considering the muscular system Wood's observations made at King's College in 1867 and 1868 are given, and the author points out that a fact of fundamental importance is that the muscles which chiefly present varieties are those which are of relatively small importance in their relation to the body generally, or those amongst which any variation is unattended with marked disadvantage to the system, either owing to the subordinate part they play or to the circumstance that their defect or absence can be supplied by other muscles. Examples of this are to be found in the musculi pyramidales palmares and plantares, the muscles of the inner ear, and the abortive muscles of the tail. Variations also occur in the muscles, not as a result of regressive, but of progressive change; such, for example, as in the case of the great flexor of the thumb.

Dr. Wiedersheim discusses at considerable length the composition, from an anatomical point of view, of the limbs, and he agrees with Balfour and Dohrn in thinking that they are outgrowths of certain primary body segments, and possessed, therefore, originally a segmental character, the bones, muscles, and nerves being variously modified in man and other vertebrated animals, supporting the theory that they all proceed from some originally segmented non-vertebrated form. In the lower types of the vertebrata there is little or no distinction between the anterior and posterior limbs; whilst in the higher types changes and adaptations are to be observed in correspondence with the functions they have to discharge. Dr. Wiedersheim then considers each bone of the two limbs in particular, and shows the relations that exist between the several bones of which they are composed. The treatise, though comparatively brief, is yet highly interesting and very suggestive.

Notes on some of the more Common Diseases in Queensland in relation to Atmospheric Conditions (1887–1891). By DAVID HARDIE, M.D., Physician to the Hospital for Sick Children, Brisbane. Brisbane: James C. Neal. 1893.

IN this work the author has collected a large mass of detailed information regarding the influence of season and weather upon disease in the important colony of Queensland. We cannot follow him into the multitude of interesting climatological questions with which he deals, but we may give a few of his conclusions. Thus he finds that "a high mortality from diphtheria is associated with low barometric pressure and low absolute range of temperature, high relative humidity, rainfall, number of rainy days, and high amount of cloud"; that "a high mortality from whooping-cough is associated with a high winter and low spring or summer temperature combined in all cases with high relative humidity and large number of rainy days"; that the mortality from phthisis seems to be lowest at a time when there is a comparatively low barometer, low temperature, low mean daily and absolute range of temperature, high rainfall, and large number of rainy days; that a large mortality from pneumonia is coincident with a high barometer, a fall in relative humidity of the air, a depression in temperature, rainfall, and amount of cloud; and that the period of highest mortality from typhoid fever is also the period of highest temperature and lowest relative humidity. We regard some of these deductions as being very doubtful.

Die Beziehungen des Sehorgans und seiner Krankheiten zu den übrigen Krankheiten des Körpers. Von Dr. MAX KNIES, Professor an der Universität Freiburg in Baden. Mit 21 Figuren im Texte. (*The Relations of the Organ of Vision and of its Diseases to the other Diseases of the Body.* By Dr. MAX KNIES, Professor at the University of Freiburg in Baden. With 21 Figures in the Text.) Wiesbaden: Bergmann. 1893. Pp. 484.

THIS volume deals with subjects that are scarcely more than referred to in any of the modern text-books, and it therefore forms a useful appendix or addendum to them. It is devoted to the consideration of the relations that exist between the diseases of the eye and those of other organs and of the system at large. Thus it comprehends the influence of diseases of the nervous system, of cutaneous disease, of diseases of the digestive apparatus, of the respiratory apparatus, of the circulatory organs, of the urinary and sexual organs, of toxic agents, of infectious diseases, and, lastly, of constitutional affections upon the eye. To each of these a chapter is devoted. The author has read largely, and has brought together many interesting cases from German, French, and English authorities. The subject was first broached by Förster in 1877, who supplied a chapter upon it to the great handbook of Graefe-Saemisch, and his essay was followed by one from Rampoldi, both of whom, like the author, proceeded from the systemic disease to the affections of the eye associated with it; whilst Jacobson in a well-known work considered the diseases of the eye first and then discussed their relation to the general disease. The reasons assigned by the author for treating the ophthalmic diseases as he has done is that they are for the most part secondary to the general diseases; and, secondly, because he thinks that repetition is best avoided in the plan he has adopted. The section on the Relations between Affections of the Nervous System and Diseases of the Eye is preceded by a detailed account of recent work on the position and relations of the centres from which the several nerves supplying the eye and its appendages spring, and more than half the volume is occupied with this subject. In the section on Syphilis Dr. Knies states that, amongst the extra-genital seats of infection, the eye follows the lips and the fingers in the order of frequency. Hard chancre is extremely rare, but when present is characterised by its great and persistent hardness, and by the pronounced swelling of the lymphatic glands of the neck, though recovery is generally tolerably complete. The only affection from which it requires to be diagnosed is epithelial cancer. Iritis is usually unilateral; it may occur in the early period and then presents no marks of distinction from the plastic form of iritis generally. Dr. Knies states that statistics show that three-fourths of all cases of iritis are due to syphilis. About 20 per cent. of the cases of syphilitic iritis present characteristic features, and the affection is then named either iritis gummosa, condylomatosa, or papulosa. Such cases occur usually in the later stages of syphilis. The secondary affections of the eye due to syphilitic infection are fully described. He observes that a form of syphilis of especial frequency is unilateral ophthalmoplegia interna characterised by mydriasis with immobility of the sphincter pupillæ and of the power of accommodation. It is easy to understand how the two nuclei presiding over these functions may be affected in an isolated manner if it is borne in mind that arteritis is the cause that the trophic area of the third ventricle differs from that of the aqueduct of Sylvius and of the fourth ventricle, and that the arteries affected are terminal branches.

In conclusion, we may say that the work fulfils its object thoroughly as a pathological treatise, but the reader must not look for many suggestions in regard to treatment.

Ophthalmic Nursing. By SYDNEY STEPHENSON, M.B., F.R.C.S. Edin. With 61 Illustrations. London: The Scientific Press. 1894. Pp. 188.

DR. SYDNEY STEPHENSON has had large experience in the treatment of epidemics of contagious ophthalmia in schools in and near London, and he has already communicated his observations to the profession in THE LANCET. The work now before us gives the result of his experience to those who have charge of ophthalmic patients and will prove useful. It commences with short introductory chapters on the Structure of the Eye, the Germ Theory of the Disease, and the Nature of Contagion. The rules to which nurses and those who undertake the care of children with affections of the eyes of an infectious nature should attend are then given very fully and satisfactorily. The modes of application of lotions and ointments and solid substances, either in the form of powder or stick, are detailed, and a good account is given of the proper arrangements and preparations that should be made for operations, with the various modes of bandaging one or both eyes. Some of the minor operations are described, such as epilation, removal of foreign bodies, and the like, and woodcuts are given of the principal instruments and apparatus required. The work may very advantageously be studied by nurses and clinical clerks or dressers who are about to enter the ophthalmic service of a hospital.

What to do in Cases of Poisoning. By WILLIAM MURRELL, M.D., F.R.C.P. Seventh Edition. London: H. K. Lewis. 1893.

IT is sufficient evidence of a book having supplied a want and of its having been highly appreciated when it reaches a seventh edition. Dr. Murrell has condensed within small compass much valuable information upon the subject which he treats, and likewise such practical hints as are only to be acquired from a large experience. Thus he points out that an unexpected source of poisoning is the slow solubility of some coated pills taken medicinally, and he mentions a case in which serious symptoms arose from digitalis having been taken in pill form. We knew that digitalis was considered to be a cumulative poison; it appears that it may also at times accumulate when administered in the above manner. Dr. Murrell also states cases in which idiosyncratic influences have led to untoward results, and he has a very useful section on Chronic Poisoning by Absinthe, Alcohol, Arsenic, Lead, and other Agents. There is at places a colloquial tone used in conveying information more appropriate, we think, to a classroom than in a manual intended for the profession. This, however, is a matter of taste. The book itself, we think, is eminently calculated to fulfil its object. It is a trustworthy guide to the treatment of cases of poisoning.

Handbook of Public Health and Demography. By EDWARD F. WILLOUGHBY, M.D. Lond., Diplomate in State Medicine of the London University and in Public Health of Cambridge University. London: Macmillan and Co. 1893.

THIS work, its author tells us, is in fact, under a different title, a third edition, greatly enlarged and improved, of the "Principles of Hygiene," which was published by Messrs. Collins in 1884 and 1888 in their series of "Advanced Science Text-books." There is consequently no need to dwell at any length upon its nature and merits; indeed, a handbook of this kind necessarily contains a large amount of condensed information which does not easily lend itself to extract and criticism. We have, nevertheless, carefully gone through it and can honestly recommend it for the scientific accuracy, arrangement, and clearness of treatment with which the various subjects are discussed. There can be but little doubt that public health officers will be armed and well prepare in the principles and practice of hygiene if they are in possession of this handbook and of the very excellent and useful "Health Officer's Pocket-book," by the same author, for the two works are to a great extent supplementary and complementary of one another. In the present work Dr. Willoughby tries to give the reader a good grip of laws and principles, and he discusses some of his subjects with originality as well as perspicuity; moreover, he furnishes occasional suggestions and hints of a practical and useful kind that are likely to prove serviceable.

LIBRARY TABLE.

Guy's Hospital Reports. Vol. XLIX., 1892. Edited by W. HALE WHITE, M.D., and W. H. A. JACOBSON, M.A., M.Ch.—We may preface our notice of this volume by congratulating the authors on the result of their labours, which have terminated in the production of one of the best books of the kind ever issued from Guy's Hospital. The volume opens with a biographical account "in memoriam" of John Hilton, by Mr. W. H. A. Jacobson, which will be appreciated by all Guy's men and will be read with pleasure by a much larger circle of admirers. Then follows a biographical sketch by Mr. R. Clement Lucas of Edward Cock, J.P., F.R.C.S., whose appearance is probably well known to many of the present generation of students at the hospital, where he was a frequent visitor to within a few months of his death, at the age of eighty-seven years, on Aug. 1st, 1892. Some reasons are advanced for retaining the term "Cock's operation" for the procedure known also as preprostatic puncture of the urethra. Both Mr. Edward Cock and Sir John Simon contributed to make known the advantages of this method of treatment in certain urethral cases; but it must be remembered that the latter recommended this method of treatment for retention due to stricture in 1852, when Mr. Cock recommended puncture through the rectum for relief of the same condition. Sir Charles Bell had, in 1838, recommended an operation in most respects similar in principle, but differing only in detail. If anyone in this country is entitled to have his name associated with this operation it is probably Sir Charles Bell. It is, however, we think, undesirable to attach the name of a physician or surgeon to any particular disease or operation. The profession is willing to give full credit to those who have brought a new operation and its advantages before them, but not for introducing another difficulty in acquiring knowledge. There are several papers of unusual length, but valuable either from a clinical standpoint or as contributions to the literature of the subjects of which they treat. Dr. Hale White contributes a paper on the Cause and Prognosis of Ascites, due to Alcoholic Cirrhosis of the Liver, to Perihepatitis and to Chronic Peritonitis. Dr. E. Petronell Manby writes on the Pathology and Treatment of Puerperal Eclampsia. Mr. C. H. Golding-Bird gives a Retrospect in Urethral Surgery. Some Cases of Malignant Disease of the Chest and Abdomen are contributed by Dr. F. Taylor. Mr. H. G. Howse gives his results of 130 cases of Excision of the Knee, to which is added an Analysis of the Cases by Dr. G. Newton Pitt. Dr. Theodore Fisher writes on Peritoneal Sanguineous Cysts and their relation to Cysts of the Pancreas. Mr. G. Bellingham Smith and Mr. Herbert E. Durham conjointly contribute a paper on Glycosuria and Surgery. Mr. George Rowell writes on the Accidents of Anæsthesia. Mr. A. H. Tubby publishes a paper on the Regeneration of Fibrous Tissue, as exemplified in the union of tendons. Dr. Thomas Stevenson gives a case of Homicidal Strangulation. Mr. Davies-Colley adds a note on the Operation of Circumcision. A list of the specimens added to the Pathological Museum during the year 1892 is appended by Dr. E. Lauriston Shaw. The illustrations are uniformly good.

This hospital does not publish a statistical account of the patients under treatment.

Annual of the Universal Medical Sciences. A Yearly Report of the Progress of the General Sanitary Sciences throughout the World. Edited by CHARLES E. SAJOUS, M.D., and Seventy Associate Editors, assisted by over 200 Corresponding Editors, Collaborators, and Correspondents. Illustrated with Chromo-lithographs, Engravings, and Maps. Philadelphia, New York, and Chicago: The F. A. Davis Company. London: F. J. Rebman. — In noticing this publication it is not now necessary to say much as to its scope and excellence; these have already been shown in five previous editions. The work has taken its place amongst the books of reference to which all interested in the progress of the profession, no matter what particular branch is the subject of study, turn with appreciation. The undertaking is a very ambitious one, and without the aid of such a large number of able men on the editorial staff it would have been impossible to attain to the high level which has been reached. The summary in the various departments is not a summary merely of English and American writings, but of the writings of all who in any country may seek to add their mite to the general total of knowledge. This gives an idea of the vastness of the yearly task in translating and in editing. The five volumes are well bound, clearly printed, and are sufficiently illustrated. No medical library can now be considered to be complete without the series.

Post-graduate Lectures on the Surgical Treatment of Deformities. By WM. ADAMS, F.R.C.S., Consulting Surgeon to the Great Northern Central Hospital, &c. London: Baillière, Tindall, and Cox. 1893.—These lectures have already appeared in print, but it is hoped by the author that their publication in pamphlet form will render them more accessible. The first lecture is on the Principles of Surgery applicable to the Treatment of Deformities and on some recent Departures from these Principles. The second lecture is on the Surgical Treatment of Deformities due to Paralysis. Mr. Adams is an advocate of subcutaneous surgery, and he views with no favour the method of treating severe cases of congenital talipes equino-varus by freely dividing by open wound all the structures on the inner side of the foot down to the bone. The ground travelled over in these lectures is familiar, and the views expressed are not "novel," but they may rather be spoken of as "sound."

Elementary Physiology for Students. By ALFRED T. SCHOFIELD, M.D. With two Coloured Plates. London: Cassell and Co. 1892. Pp. 372.—We should have supposed that there were almost enough students' manuals of physiology, but it appears that there is room in the numerous schools and educational institutions in this country for an almost unlimited supply of such works. The present one is short and clear, and is well illustrated. It is adapted for a student attending a first course of physiology, and in accordance with this it contains a reasonable account of the histology of each tissue before discussing its physiology.

Diaries, Christmas Cards, and Calendars.—We have received from Mr. Frank Smythson a very convenient and handsome appointment register and a neat diary, named "The Court." The "Engagement Remembrancer" is also a handy contrivance.—From Mr. C. W. Faulkner we have received, as well as some admirable specimens of his tasteful Christmas cards, some really beautiful calendars. For high artistic merit his calendar of "The Seasons" will be very hard to beat. "The Maypole Dance" from the same publisher is a little collection of ballads with coloured illustrations, whose daintiness and grace will be somewhat wasted on the average child.—From Messrs. Parkins and Gotto we have received specimens of what we may term the "personal" Christmas card, bearing the printed name of the donor above the seasonable wishes. Many of these are very quaint, but we are not sure that this business-like method of circularising our friends quite commends itself to us.—Messrs. Hildesheimer and Co. are responsible this year, as heretofore, for many novelties in the pattern of Christmas cards. Many of their designs are very careful and elaborate, and for this we give them every credit, but we are glad to see that they also supply a very large selection of simple humorous cards at low prices.

New Inventions.

A NEW BLADDER DOUCHE.

MESSRS. WRIGHT of New Bond-street have made, at my suggestion, a new bladder douche or irrigator which is both handy and cheap. It is adapted either for standing, hanging, or holding, whilst the makers are prepared to supply it to hospital patients at about half the price usually charged for irrigators now in the market. It consists of a glass reservoir

in a japanned frame with folding handles. To the bottom of the reservoir is attached a piece of indiarubber tubing ending in a conical pewter nozzle which will fit any catheter from Nos. 8 to 24, French gauge. On the rubber tube is placed a clip for shutting off the steam, which can be worked with one hand. No novelty in principle is claimed, but simply that, being cheap, handy and efficient, it seems to me to supply a want.

Harley-street, W. F. SWINFORD EDWARDS.

THE PATENT COMPLETE SIGHT TEST.

THE Optical Institute of London have forwarded to us an apparatus adapted for determining the sharpness of vision, together with the refraction of the eye and the errors to which the refraction is liable, the convergence of the eyes and the presence of colour-blindness. The apparatus consists of a card with two perforations revolving on a central pin, beneath which is a second card presenting colours that can be brought to the openings of the first card and constitute a test for colour vision, and a third revolvable disc succeeds having parallel lines which test astigmatism. These all move on a large card on which is printed letters of differing size as in the ordinary Snellen test-board, together with a horizontal line marked for meter angles and also for the angles at which cylinder glasses give them the best results. The apparatus is well devised for the object in view. A fly-leaf accompanies it, giving the mode of employing it, and also another stating that the Optical Institute of London has been organised for the purpose of giving instruction in the fitting of glasses for the correction of defective sight. There can be no question that opticians should know the uses of their wares, whilst it is perfectly true that in a simple, straightforward case of trouble from advancing years it is not difficult for an optician to select the proper glasses for a customer. Yet the organisers of the institute may be reminded that the eyes are delicate instruments, that many points require examination and testing besides refraction in cases of defective vision, and that "a little knowledge is a dangerous thing."

THE LANCET.

LONDON: SATURDAY, DECEMBER 16, 1893.

SELDOM, if ever, has an election to the Presidency of the Royal College of Physicians of London excited so much interest, whether within the College itself or in the professional world beyond its walls, as that which was decided on the 14th inst. The unusually large comitia (numbering fully one-half of the constituency), the assembly of provincial as well as of metropolitan Fellows, and the closeness of the voting reflected the keenness with which the election was regarded and the importance that was felt to be attached to it; indeed, the vacancy so unhappily created was one which could not be easily filled. The general feeling amongst the Fellows must have been one of perplexity as to which of their number was best fitted to succeed to the chair vacated by the most strenuous and energetic physician whose loss is deeply deplored; and looking to all the varied interests and functions of the College, its relations to the State, to the public, and to the profession in ethical and educational matters, it must have been felt that the selection of a President was a duty of great responsibility and one not to be lightly discharged. Nor can one read the names of those who received most support at the first ballot without acknowledging that the College did appreciate the importance and gravity of the occasion. It might be thought that as the election is an annual one, fixed by statute to take place on the day after Palm Sunday, the affairs of the College could well have been left in the able hands of the estimable Pro-President and Senior Censor, Dr. POLLOCK, and that time would thus have been gained for a more mature reflection upon the choice that had to be made; but the law also provides for the prompt filling of vacancies in the office of President that may occur through death or resignation, and the Fellows had therefore no option but to arrive at a decision without delay. It is pleasant to note that Dr. POLLOCK'S services were recognised in the votes that were accorded to him, for all will admit that he has discharged the duties so unexpectedly cast upon him with becoming dignity and efficiency.

There are three names which naturally stand foremost among the number who received the suffrages of the Fellows. The votes cast for Sir RICHARD QUAIN must be gratifying to him, although his position as President of the General Medical Council would probably have precluded him from assuming the Presidency of the College. The votes, however, show that his ability and standing were recognised by the Fellows as fitting him for the latter office. It became clear on the first ballot that the contest would eventually lie between two distinguished Fellows, Dr. WILKS and Dr. RUSSELL REYNOLDS, and the curious reversal of their relative positions in the first ballot by the same small majority of three votes on the second ballot was a remarkable and exciting feature of the poll. Yet this is precisely analogous to what occurred at the last contest in 1883, when the late Sir ANDREW CLARK, who obtained the second place on the first ballot, secured a majority of eight votes in the second. Such voting shows that the opinion of the College as to the personal fitness of the two Fellows for the high office was equally divided, and that it was felt that the College would be fortunate if it secured the services of either. The claims of Dr. WILKS to such recognition from his fellow physicians are, indeed, of high order. Through a long and honourable career he has invariably upheld the highest and purest standard of professional morality and ethics; he is esteemed far beyond the great medical school with which his name is linked; his contributions to pathological science are recognised all the world over; while his connexion with the University of London might have been of no small advantage to the College in the coming reconstitution of that university. On many grounds Dr. WILKS had well earned the right to the "blue riband," and his election would have been well received by the profession at large, for it is men of his stamp whom it is a delight to honour. That he was not finally selected is no discredit to him; indeed, he may well be proud of having secured such abundant support, and relieved, perhaps, to find that the onerous and anxious duties falling to the president of an institution like that of the College have been spared him.

In their choice of Dr. RUSSELL REYNOLDS the College has secured as President one who is well worthy to wear the mantle of JENNER and of CLARK. Elected to the Fellowship in 1859, he has served the offices of Councillor and of Censor; in 1867 he delivered the Lumleian Lectures, and in 1884 the Harveian Oration. In point of culture he ranks well with the illustrious names on the presidential roll, whilst in dignity and courtesy few are better fitted to grace the chair; but the College will also find in Dr. RUSSELL REYNOLDS one who will conduct its important affairs with sound discretion and who will govern it in a liberal spirit. As a former Professor of Medicine at University College and for many years physician to its hospital, he cannot fail to be in sympathy with the educational movements in which the Royal College of Physicians is now playing so large a part. We do not doubt that his judgment and sense will guide the College through a period of its career which may prove to be a critical one. Lastly, he has earned the position that has been assigned him as leader of British medicine from his contributions to the elucidation of diseases of the nervous system and the service he rendered in the production of the treatise which still stands in the front rank of medical literature. The College has to maintain the position that it has gained with rapid strides within the last twenty years, it has to fulfil the great responsibilities it has undertaken, and it will need to be guided and governed by one who is alive to all that may be required of it. We think that in the hands of Dr. RUSSELL REYNOLDS there is no fear that the College will not continue to advance on the lines of progress which were initiated by his distinguished predecessors.

THE recognition of science teaching in schools and university colleges is a point of very great interest and was incidentally referred to at the recent meeting of the General Medical Council. Many would agree with Dr. GAIRDNER that it is a great misfortune that there is not more science teaching under the ordinary school training. Although Mr. BRYANT at last succeeded—by the casting

vote of the President—in getting the Council to alter the rule which recommends the non-recognition of study in physics, chemistry, biology, and practical pharmacy prior to registration, the opinions expressed by many of the members showed that they were disinclined to make changes in the curriculum which had been only recently drawn up. It was probably felt to be doubtful whether the recognition of science teaching before registration could be afforded without impairing that good general school education to which the Council attaches supreme importance as the groundwork of all good professional education.

A long time was spent by the Council in supporting the President and the Education Committee in their protest against the operation of one of the ordinances of the Scottish Universities Commission recognising instruction in physics, chemistry, botany, and zoology before passing a recognised examination in general education. It will not be the fault of the Council if the Scottish Universities Commission does not see in the Council's own proceedings an excuse for letting the ordinance stand as it is. Passing from this subject, we regret to notice that the Scottish members of the Council again took the lead in restricting the curriculum for State diplomas otherwise approved, on the ground of *non possumus*. The scandal of regarding attendance on twelve midwifery cases as a training in practical midwifery, which has been exposed before a Committee of the House of Commons and made a ground of unfavourable comparison of medical men with midwives, lies at the door of the Scottish members of the Council, who maintained that more could not be obtained for students in such teeming cities as Edinburgh and Glasgow. They have repeated the same poor argument against requiring candidates for diplomas in State medicine to produce evidence of having had practical instruction in diseases of animals. It is lamentable to see such members of the Council as Sir WILLIAM TURNER and Dr. CAMERON, representing the chief towns of Scotland, where it is notorious facilities abound for such instruction, supporting the neglect of it. It is time this *non possumus* argument was abandoned. If certain places cannot give the instruction which is required so much the worse for those places. That is no reason why the Council should not do its duty in prescribing a proper curriculum.

We have felt it our duty to criticise certain imperfections in the Council's way of doing business, but we are by no means blind to the really good work which it does, and of which there are many illustrations in the minutes of the present year. Too much praise can scarcely be accorded to the President for the admirable way in which the position of the great question of International Reciprocity of recognition, and the illiberal state of the law in some foreign countries — notably France and Switzerland — towards medical men holding British qualifications, is stated. It is monstrous that in those countries where, very much in consequence of British medical opinion, there are large colonies of British people, many more or less sick and needing a physician, and naturally preferring one of their own nationality, British medical men are not recognised —and, indeed, subject themselves to heavy fines even by practising. Thanks to the long and persistent representations of Sir RICHARD QUAIN to our foreign Secretaries, and through them to foreign Governments, the liberal state of our own law is now pretty well understood as is the equally narrow and illiberal state of the law of other countries. The minutes of the present year will be valuable as containing in Appendix A Sir RICHARD QUAIN'S report on this important subject.

It would be unjust, too, not to recognise the great labours of the chairman of the Education Committee and his colleagues in the preparation of the reports on the Regulations of the Licensing Bodies granting Diplomas in State Medicine; and on the Answers of the Licensing Bodies to the Resolutions passed by the Council; as well as the great value of the criticisms of the inspector and visitors contained in their reports on the final examinations which they have visited—viz., those on the Irish Universities and Scottish Corporations in 1892 and those of the Irish Corporations and English Universities in 1893. We have not yet heard the last of these criticisms, some of which are very serious, and which may lead, if not met quickly and effectively, to the unprecedented step of representation to the Privy Council. The General Medical Council also deserves credit for having resolved to appoint an Inspector of the Examinations in State Medicine. It is obvious that apart from inspection we shall not elicit the truth about these examinations or any examinations. The fruitless result of the labours of the Examination Committee on the Statistics of Rejection, though so effectively aided by the Registrar's great statistical ability, is proof enough that the mere statistics of rejection convey no information. A look at the candidates, at the methods of examinations, at their papers, and a little attention to their behaviour at oral examination convey infinitely more suggestion and information. It is to be regretted that the Council did not deal somewhat differently with Dr. RENTOUL'S petition, though it was signed only by 111 practitioners. Dr. RENTOUL is right in pointing out that certain bodies which have no legal authority to do so pretend to give certificates and even diplomas in midwifery. This is an irregularity already recognised by the Council, but for the correction of which it has used so far no effective means. It might use such means without in any way committing itself to the extreme views which Dr. RENTOUL holds on the subject.

IT is announced that the Convention concluded at the International Sanitary (Cholera) Conference of Dresden has now been laid before the German Reichstag, together with a Protocol announcing Great Britain's accession to the Convention, but subject to the following proviso:—"The United Kingdom of Great Britain and Ireland accedes to the Sanitary International Convention concluded at Dresden on April 15th, 1893, and to its appendices, but with the reservation that persons in sound health on board infected ships arriving at ports in the United Kingdom shall not be subjected to 'observation,' but only to medical surveillance at their homes." This announcement brings to a highly satisfactory termination two out of three stages of a difficulty which has been felt for over fifty years, and which has defied the intentions of many international gatherings collected together for its solution. The first stage was dealt with when, after amendments brought about by the Supplemental Paris Conference

of May, 1892, this country consented to sign the Venice Convention of the previous January. That Convention dealt essentially with the traffic from the Far East up the Red Sea, through the Suez Canal, and into the basin of the Mediterranean. The importance of an understanding as to this was vital to this country's interests, especially in view of the necessarily constant intercourse between our home and our Indian ports. Some of these latter ports were nearly always "infected," according to European notions; but we absolutely and firmly declined to allow healthy people to be subjected to quarantine in the miserable establishments—or mockeries of establishments—provided for that purpose in the Red Sea. This persistent attitude on the part of our delegates led to the breakdown of the Rome Conference of 1885; but in the end the purposes we have all along had in view have been attained, and the old-fashioned practice of deeming people so dangerous, that they must be locked up merely because they happen either to have come from an infected port, or to have travelled in a vessel which at some antecedent date, more or less remote, has been an infected vessel, is, so far as England is concerned, practically at an end. Vessels really infected will only be dealt with as such before entering the Suez Canal, and no one sailing under the British flag need ever be landed on the shores of the Red Sea so long as the medical officer of the vessel is prepared to say that he is not suffering from cholera.

The second stage of the difficulty was happily overcome at Dresden. Here the delegates dealt with cholera in Europe, including the Mediterranean. Once again, whilst consenting willingly to all needed measures of disinfection and of dealing with the actual sick, and also whilst in no way interfering with the discretion of Continental Powers in controlling land or river traffic across their frontiers, the British delegates were firm in refusing the control of shipping which involved the detention of healthy persons in quarantine in our ports merely because such people were looked upon with suspicion. For certain classes of vessels a "period of observation" was decided on at Dresden as regards the healthy passengers arriving in infected or even suspected vessels. The British delegates willingly assented to the principle of "observation," but they refused to accept the Continental interpretation of it. Our Cholera Regulations require that persons landing from infected vessels shall give the addresses of the destinations to which they are travelling in order that the local inland authorities may, by keeping them under observation for a few days, learn at the earliest moment if they should sicken of cholera; but other Governments intended to use the power conferred on them to confine these travellers in port quarantine establishments. Hence the reserve made at Dresden when assenting to the principle, and hence the formal reserve made in the Protocol to the Convention by our delegates with the authority of the British Government. Here, again, we see that England has for many years been firmly resolved not to accede to the pressure of foreign Governments in the matter of quarantine, and though we have had long to wait, we have only waited just so long as was necessary to bring the other contracting Powers into line with the position which England decided on finally about 1872, and to which she has firmly adhered without wavering ever since.

But there remains a third stage which affects this country mainly in connexion with her Eastern possessions. It is the control of pilgrims attending Mecca and Medina, in such way that those travelling under the auspices of the British Government can be held free from the suspicion of having conveyed cholera into a mass of humanity so circumstanced that the disease must of necessity spread and cause a havoc which probably has no parallel in any other part of the world. If the matter were thoroughly inquired into it would probably transpire that our Indian Government does much more than it receives credit for, and that much of the cholera which is, in ignorance, put down to arrivals by ship from Indian ports is really carried overland by the many thousands who travel in that way and who enter Arabia from the East. We should also learn how utterly futile and miserable are the arrangements made by the Turkish Government to deal with any accidentally imported case of the disease; but we are promised a further international gathering in order to see where the difficulty as to this pilgrim traffic lies, what is the truth about it, and how far it may be remedied. England—using that term in the widest Imperial sense—will again be only too glad to lend a helping hand; and whilst she will again refuse to sacrifice sound principles of public health, she will spare no reasonable trouble or expense to prevent any importation of cholera by means of pilgrims travelling from British or Indian ports to ports on the Arabian shore of the Red Sea. Our success hitherto is a token of future success in coping with so fatal a malady; and at the moment we have only to congratulate ourselves on another step towards the prevention of cholera, which has been achieved in connexion with the Dresden Conference.

Annotations.

"Ne quid nimis."

DR. BACCELLI—THE NEW MINISTER OF PUBLIC INSTRUCTION IN ITALY.

FROM the Parliamentary throes in which she has for the last few weeks been struggling Italy emerges with a new Cabinet, stronger and more viable than the most promising of its recent predecessors. It combines elements drawn from the Right, the Left, and the Centre, and will doubtless be supported by a sufficient following in all parts of the Chamber to ensure despatch and efficiency in its legislative and administrative work. By universal admission one of its most able members is the Professor of Clinical Medicine and President of the Accademia Medica in Rome—Dr. Guido Baccelli. His portfolio is that of Public Instruction, which he held in a previous Administration with much skill and tact. Short as it was, his tenure of office is still remembered for the salutary reforms effected in intermediate, and, above all, in professional education, for the impulse given to scientific research, and for the treasure-trove with which archæology enriched her museums. The recognised head of a calling whose watchword is "Upwards and onwards," Dr. Baccelli, in a recent address to his constituents, gave a clear and impressive outline of the task of statesmanship in Italy. To the furtherance of this he is now, in the zenith of his powers and with the experience he has already acquired, called upon to contribute, and the many and much-demanded innovations expected of him are a measure of the confidence he inspires in the most enlightened of his compatriots. One undertaking, dear to every professional Italian, will certainly profit by his

elevation to office—the speedy and satisfactory completion of the "Policlinico" whose claims have been so fruitlessly urged upon preceding Ministries. With the accelerated progress that noble "shrine of Minera Medica" may at length count on making, all doubt as to a fitting *locale* in which the Eleventh International Congress of Medicine and Surgery can hold its sittings is at an end. An additional guarantee for the success of the mighty gathering is indeed afforded by the fact that its president is also the new Minister of Public Instruction, whose goodwill and solicitude for the best interests of its members only required official opportunities and powers for translation into deeds. Thus the Congress, opened by the King and presided over by one of the wisest and most popular of his Ministers, has unusual and unexpected prospects of happy results, not the least of which will be the profitable account to which its lessons, practical and theoretical, will be turned by a President who has so deeply at heart the professional advancement of his country.

"THE QUEEN OF ENGLAND IN FLORENCE."

THE leading journals of Central Italy announce, from official information received in Florence, that Her Majesty Queen Victoria will certainly visit the Tuscan capital next spring. This intention on the part of the Queen has, for some time, been known to our readers. "When at Windsor last summer," says the *Nazione* of the 11th inst., "Prince Corsini took leave of Her Majesty, the Queen replied, 'A rivederci a Marzo' ("till we meet again in March"). "Various *internuncii* of the Royal household," continues the Florentine journal, "have already in the course of the autumn been inspecting more than one of the villas in our environs, and indeed, we know that Colonel Biggs, who accompanied Her Majesty on the Queen's last visit, is in treaty with the proprietor of the Villa Fabbricotti at Montughi for Her Majesty's vernal villeggiatura." For the present the project of a ten days' subsequent residence in the Royal villa at Capo di Monte, seems abandoned in favour of a short visit to King Humbert's Lombard Castle at Monza. This modification of programme has much to recommend it—the advantages of the Neapolitan villeggiatura being more than balanced by those available at Monza, with its proximity to the North Italian lakes, and to the noble mediæval cities of the Lombardo-Venetian territory.

THE NATURE OF THE RECENT EPIDEMIC AT GREENWICH.

THE Greenwich epidemic is still involved in a good deal of obscurity. At the adjourned inquest which was held on the 12th inst. both Dr. Bulstrode of the Local Government Board and Dr. Klein, F.R.S., were present as witnesses. Dr. Bulstrode announced the conclusion at which he had arrived as the result of the investigations—etiological, bacteriological, and chemical—which had been carried out; and the terms in which he did so had evidently been carefully thought out. He stated that the disease, which had been fatal to old people in the workhouse, and which had also prevailed in some parts of the town of Greenwich, was an infectious form of diarrhœa which was shown bacteriologically not to have been Asiatic cholera, but which, having regard to its distribution in Greenwich and its seasonal incidence, was probably related to those forms of diarrhœal sickness that especially tend to prevail in seasons when cholera is prevalent in Europe. For the precise significance of this differentiation of the Greenwich diarrhœal disease from true cholera we would refer our readers to our comments on "Cholera in England: its Bacteriological Interpretation," in our issue of Nov. 25th last. Dr. Klein, in giving evidence, decided that bacteriologically the disease was not Asiatic cholera; but in all the fatal cases which he had examined he had found a definite bacillus which was not present in the healthy intestine, but which, in his view, might have been concerned with the malady. Here again we are face to face with the exceedingly difficult problem as to whether there is any etiological relation between our English cholera and our autumnal fatal diarrhœa on the one hand and Asiatic or true cholera on the other hand. The point will never be cleared up at coroners' inquests, and we trust that no attempt will be made to supersede skilled bacteriological investigation with recent materials, by a process of the heretofore clumsy methods involving delay which have been customary at some of our inquests. The investigator must be almost on the spot to secure such material as he needs, and if he has to wait the pleasure of public officers appealing to the Home Office or other bodies he may just as well drop his work altogether. On the other hand, there need be no difficulty in his receiving six to eight inches of the small intestine without in any way interfering with any such work as devolves upon a coroner and a jury, who are incapable of understanding the etiological points at issue; and it seems to us a pity that, with such abundant material as was available in the case of the eleven bodies of those who died of the Greenwich disease, any cavilling about bacteriological and etiological research should have been heard.

THE DIFFUSION OF SMALL-POX.

IN some of the towns where small-pox was most rife a diminution in the intensity of the prevalence is observable. Thus, the fresh attacks last week in Bradford were reduced to 30, and in Walsall to 37, the number of patients under treatment in the hospital at the latter place being also on the decline. On the other hand, the disease in Birmingham shows but little abatement. There were 66 fresh attacks last week, some 240 patients are in hospital, and the authority have decided to erect a permanent small-pox hospital in a very sparsely-peopled part of the borough, and to allot more than twenty acres to that purpose. In Bristol an increase is noted, the fresh attacks amounting to 25; and in other places the numbers were as follows: West Ham, 14; Wakefield, 12; Aston Manor, 9; Liverpool, 5; Bath, 3; Middlesbrough, 3; Handsworth, 2; and Leicester, 2. There were also small-pox occurrences in Batley, Bolton, Croydon, Wimbledon, Willesden, West Bromwich, Rowley Regis, Smethwick, Derby, Chadderton, Oldham, Huddersfield, Halifax, Dewsbury, Hull, Aberavon, Willenhall &c. In the metropolis there were 20 new cases last week, one epidemic area being Bow-common-lane; and there were on the 11th inst. 114 cases under treatment at Long Reach and the Gore convalescent establishments.

THE SOCIETY OF ANÆSTHETISTS.

IN another column we publish a report of the first meeting of this Society. So much importance has of late been attached to all matters connected with anæsthetics that there is no doubt a *raison d'être* for such a society. While many surgeons and physicians have undertaken special work in connexion with the elucidation of both the physiology and practical bearings of anæsthesia, there has up to the present time been no society where such work could be sure of being intelligently criticised and discussed by those experienced in the subject. Now, however, if anæsthetists fail to get their results duly ventilated it will be their own fault. THE LANCET has always been so impressed with the immense importance of careful and accurate study of anæsthesia that since 1848, when Mr. Wakley published his observations on chloroform in these columns,[1] we have uniformly accorded to the subject the space its importance deserves, and have

[1] A Record of One Hundred Experiments on Animals with Ether and Chloroform performed by Thomas Wakley, F.R.C.S., Surgeon to the Royal Free Hospital, THE LANCET, Jan. 1st, 1848.

recently undertaken and carried out an elaborate clinical record of the effects of anæsthetics on the human subject. At the initial meeting of the society Dr. Oliver of Harrogate brought forward an important matter, which, together with the discussion it elicited, occupied the major part of the time at the disposal of the meeting. Dr. Oliver, extending his researches upon the changes in size of the radial artery in various conditions of disease so as to gauge those brought about by the inhalation of anæsthetics, was able to demonstrate some very remarkable facts in connexion with chloroform and ether and nitrous oxide gas. His results, which he was anxious to have regarded as tentative, went to show that the artery rapidly lessened in calibre under chloroform, while it underwent considerable dilatation under ether. Nitrous oxide gas was placed midway between these agents. These results are certainly interesting, and will no doubt throw some further clinical light on this *quæstio vexata*.

CORNWALL COUNTY COUNCIL.

THE sanitary committee of the Cornwall County Council are a very energetic body, presided over by a chairman who takes the keenest interest in all public health matters. This committee have, however, not as yet seen their way to secure the appointment of a county medical officer of health, and it is a little difficult to interpret the meaning of a recent important step taken by them in this direction. Instead of appointing a county medical officer of health, they have, where inspection of any locality appeared to them to be desirable, obtained the services of one of the district medical officers of health to make the inspection and report to them thereon. There is of course nothing whatever to be said against the highly qualified gentleman on whom the choice of the committee has hitherto fallen, but we cannot say that we are in favour of this principle of selecting one district medical officer of health to inspect and report upon the district of his colleagues, and we cannot believe that it is a step calculated to bring about a harmonious feeling between the county council and the local sanitary authorities. The recent action of the sanitary committee will do something to demonstrate the necessity of a county medical officer of health, and we shall hope shortly to hear that the county council have decided to afford to the sanitary committee the professional assistance they so richly deserve.

WINTERING IN THE SOUTH.

THE high death-rates of the principal towns of Great Britain, together with the great increase of mortality from diseases of the respiratory organs, clearly indicate that this is the moment when those who can pass the winter in the South should take their departure; nor should the fact that there has been some cholera on the Riviera during the extremely hot weather of last summer act as a deterrent. The Riviera is not likely to be more unhealthy this winter than in any previous winter. The health resorts of the South of France and the North of Italy have always been unhealthy. Their drainage is bad and their death-rate is high; nevertheless health has been restored and lives have been prolonged by "wintering in the south." A high zymotic death-rate—the result more especially of excessive infant mortality—need not deter adults and aged persons affected with diseases of the respiratory organs from seeking the winter sun, the warmth, and the dry climate of the Riviera. Besides, even respecting sanitation there is progress being made along the whole line. Disinfection is now the usual practice, and there are some hotels and villas on the Riviera that have been drained in the most approved and satisfactory manner. The care taken to protect the public from consuming unwholesome food is also a subject of constant attention. The cattle are killed in public slaughterhouses, and each piece of meat is not only inspected but stamped. Thus the purchaser can see for himself if the meat has been examined, as otherwise it would not bear the slaughterhouse stamp. In the Principality of Monaco new and very useful precautions have been enforced this year to prevent the contamination of water by ice. All the ice sold in the Principality is supplied by the Compagnie des Glacières de Monaco, being made from distilled water by means of freezing machines. Ten per cent. of the ice consumed in the Principality is thus made from sterilised water, and care should be taken to obtain this ice for all table purposes; the remainder is brought from inundated prairies near Monchiero, in Italy. The water comes from the river Tanaro. Care is taken to prevent the contamination of this ice; but it cannot be considered to be perfectly pure. It is brought to Monaco in carts, and might be contaminated either during the journey or by coming into contact with the bottom or the sides of the flooded prairies. The public, however, by constantly demanding the manufactured ice, would greatly help the authorities, who are seeking to limit the sale of the natural ice. Whatever sanitary progress has been realised on the Riviera is due to the complaints made by the visitors. It thus becomes a public duty to complain, as by doing so reforms are obtained which will prove of advantage not only to the visitors but to the native population.

THE REGENT AND GRAND JUNCTION CANALS.

IT is stated in the public press that a conference of sanitary authorities was held last week at the offices of the London County Council with a view to steps being taken for the improvement of the condition of the Regent and Grand Junction Canals. The insufficiency of the flow of water through the canals is held to be one of the causes which contribute to the production of nuisance in the canals, and it has been decided to address the Board of Trade on the subject. It may be expected that the Council's by-laws made under the Public Health (London) Act, which place limitations upon the deposit of refuse near inhabited houses, will lead to an improvement of the dust-yards which now exist on the banks of the canals, and which give opportunity for the pollution of the water. A report recently issued by the medical officer of the Council, and which gives an account of all the sources of pollution of the canals, is a convenient basis for the proceedings of sanitary authorities. There is evidently a general desire of these authorities to improve the canals and the discontinuance of sources of nuisance in their districts is within their power.

THE NEW LAW OF SCHOOL ATTENDANCE.

IT is a subject for regret, but not the less for practical treatment, that the privilege of education is still regarded by many persons as a benefit of largely theoretical and of somewhat questionable value. Were it otherwise there would be much less occasion than there is for such a colossal charity as the free school or for such legislation as is embodied in the Attendance Act of 1893 expressly for the purpose of enforcing regularity in training. It will be remembered that by the terms of this Act the age of exclusive school attendance has been raised from ten to eleven years, and that after this limit has been reached the half-time system comes into operation and secures to most children a continuance of limited instruction up to thirteen years of age. We must confess to some dissatisfaction with the arrangement which allows of total exemption in cases of proved efficiency. It is not at all clear how the mere passing of certain standards can justify the reduction of the term of school life by a fourth of the whole period. No system of "cram," however striking its result in examinations, can compensate for two years which might have been employed in the more gradual assimilation of knowledge. A clause in the new regulations which provides for the coöperation of other measures allied in purpose

(such, for example, as the Factory and Workshop Acts) is noteworthy as a further guarantee that the requirements of labour will not be permitted to eclipse those of education. Liberty of conscience is provided for in the fullest manner, so that there remains absolutely no ground of excuse, health permitting, for the abstention from school of children capable of receiving instruction. We feel assured that no trade interest will suffer, but that, on the other hand, gain will result every way from the contraction of the half-time period to two years instead of three as heretofore.

SANITARY ADMINISTRATION.

A LADY last week made application to a magistrate, Mr. Dickinson, for a summons against her landlord for allowing the house in which she resided to remain in an insanitary condition. Her application was supported by the sanitary inspector of the Poplar Board of Works, who corroborated her statement as to the condition of the house, stating that he could not himself move in the matter without the sanction of his authority, "and the sanitary committee would probably not meet for some time—in fact, the applicant had more power than he had." We trust that the Poplar District Board of Works will regard this matter as being of sufficient importance to require explanation. Notices are served in most parts of London on the authority of the sanitary inspector, whose action is confirmed at a subsequent meeting of the sanitary committee, when authority is given for the application for summonses in all cases in which there has been default to obey the notices served by the inspectors. There need be, and ought to be, no delay in such proceedings, and we trust that the Poplar District Board of Works will organise its machinery for dealing with nuisances to this end.

THE INSTITUTE OF CHEMISTRY.

ANALYTICAL and consulting chemists have long recognised the necessity of setting up a high standard of scientific and practical proficiency, and the desirability also of establishing an authoritative code of ethics which shall guide or determine the conduct of those engaged in giving professional advice to the public on those matters on which a sound knowledge of chemical science is essential, and of ensuring a competency to undertake analytical operations. It was with this excellent purpose in view that the Institute of Chemistry was founded in 1877, although it was then simply incorporated under the Companies Acts. For several years endeavours were made to render the institute something more than a mere society of chemists—one of the most successful scientific societies of the present day, the Chemical Society, being then in existence—and after considerable delay the institute was at length incorporated by Royal Charter in 1885, the intention being, as set forth in the present register, to promote the better education of persons desirous of qualifying themselves to be public and technical analysts and chemical advisers on scientific subjects, and to give to the institute power to examine such persons and to grant certificates of competency. The institute is now taking a legitimate place among the examining bodies of the country, and the certificate or diploma which it grants to its members may be accepted as unquestionable evidence of chemical and analytical qualifications. No better testimony of the increasing appreciation in which the institute and its diploma are held could be furnished than by the fact that the increase of applicants for admission to the examination has made it quite impossible to conduct the practical examination in the manner hitherto adopted. The position of the institute, it was felt, would remain unsatisfactory so long as it was dependent upon the goodwill of other institutions in affording a suitable place in which the practical examination could be held. After a meeting of the Council and Fellows in October, 1892, it was decided to secure premises in which not only a properly equipped laboratory could be built but rooms also for the carrying on of the ordinary business of the offices. All this has since been done, and the opening of the laboratories and the inauguration of the offices on Friday last at Bloomsbury-square by the president of the institute, Professor Tilden, D.Sc., F.R.S., will be viewed by all concerned as an event of considerable importance in the history of professional chemistry. In declaring the laboratories open Professor Tilden explained that the institute insisted upon a course of training extending over three years, at the end of which time a student could become an Associate if he had satisfied the examiners in the various branches of study prescribed, but another three years' study was necessary before an Associate could become a Fellow of the institute (F.I.C.). A novel requirement of the examination, and one which may well be commended, we think, to the notice of other examining bodies, is that every candidate is expected to forward to the Registrar before he is examined his note-book containing a record of the chemical work of all kinds done by him during the last two years of his studentship, the genuineness of the record to be attested by himself and his professors and teachers. Besides the ordinary provisions for laboratory operations in the new building, there is also a balance-room and a room set apart for combustion and blow-pipe appliances. Special arrangements have been made for the efficient ventilation of the room, while a draught-pipe, opening on to the operating benches, conveys any noxious fumes through a coke tower, down which water trickles, whereby offensive vapours are removed. The Council are to be congratulated on the improvement which, with considerable anxiety, they have undertaken; but some movement in this direction was imperative if the institute is to attain the standing which its position now appears to demand. It is gratifying to learn that English chemists are working together to establish a standard of professional conduct amongst their colleagues comparable with that which is recognised in the professions of medicine and law.

REGISTRATION IN EGYPT.

IN the annual report of the Egyptian Sanitary Department for 1892 the Director-General, Dr. Rogers Pasha, affords some interesting information regarding the system of registration which obtains in that country. It appears that, in addition to sanitary and medical duties, properly so called, Dr. Rogers is also charged with the supervision of what is known as the *État Civil*—he is, in fact, a registrar-general as well as head of the Public Health Department. This he rightly considers to be somewhat of an anomaly, and he would gladly see a radical change involving the creation of a separate statistical department appertaining to the Ministry of Finance. The agents for inscribing births, deaths, and vaccinations in the districts are called *sarrafs*, but though they do the work of the Sanitary Department these people really belong to the Treasury and are in no way under the Ministry of the Interior. As a natural consequence their registration duties "are apt to be much neglected, and, worse still, neglected with impunity." According to the existing law the local register should be kept up to date by the *sarraf* under the supervision of the village sheikh; but inasmuch as the former—who, as his designation implies, is also tax-gatherer—is frequently absent on what he regards as his more important, and personally more lucrative, business, the registers naturally suffer. As Dr. Rogers pertinently observes, "not even an Egyptian *sarraf* can serve two masters," and the wonder is that registration is carried out even as well as it is. The *sarrafs* are further charged with making out the birth and death certificates prescribed in the new law of registration. Dr. Rogers looks on these documents as being "of no possible interest to the Sanitary Department," and he objects strongly to being charged with a duty he has no means of

carrying out efficiently. "The declaration is supposed to be made within seventy-two hours of birth; as a matter of fact the *acte* is made out whenever the *sarraf* happens to be in the village and is disposed to issue the copies to the interested individual." The Director-General thinks that the registers should be entrusted to the care of the sheikh, as he is more constantly present in the village. Were sheikhs able to write they might be entirely charged with the registration, but unfortunately the majority are ignorant. Dr. Rogers next alludes to a very important matter. "The statistics published by the Department are not based on accurate data. The census of 1882 is now of little use. ..... All figures are thus based on a census practically inaccurate, the error being a large one." We would go even further than this; the census is not only valueless now, but never possessed any scientific value. Taken in a haphazard fashion during the Arabi disturbances it was at best nothing but an elaborate system of guesswork, the numbers in each village and town being entered *en masse* according to the opinion of the compiler. An accurate census is one of the most urgent requirements of New Egypt, and as it would not cost very much there is no reason whatever, in view of the annually increasing surpluses, that it should not at once be undertaken. "The death certificates in the provinces other than those given from the hospitals are practically unreliable, and medical statistics based on them equally so. ..... There is room here for a vivid imagination to play havoc with the most carefully compiled statistics; but in villages in which the death is certified by the barber an attempt at diagnosis is naturally not made, and the cause of every death is stated to be the 'ordinary' one." It is within our recollection that most of the defects noticed by Dr. Rogers have been alluded to in previous reports, but perhaps more attention may be paid to them now.

TUBERCULOSIS IN SOUTH AMERICAN MEAT.

As probably more of the beef eaten in this country is imported from South America than is commonly supposed, some interest is attached to an article on the subject of Tuberculosis in Colombian Cattle, published in the September number of the *Revista Médica de Bogota* by Dr. Miguel Arango, who says that, although it is quite true that a very large proportion—perhaps as many as 90 per cent.—of the cattle slaughtered in Bogota are found to have small tumours in the intestines these are not, as has been supposed, of a tuberculous origin. These tumours vary in size from that of a hemp-seed to that of a grain of Indian corn. They lie in the submucous tissue and consist of a white, fibrous envelope which is firmly adherent to the surrounding tissues, containing in the case of the smaller tumours a white jelly and in the larger ones a darker and firmer substance. In the smaller tumours the contents become transformed into fibrillæ under the action of ammonia, while in the larger ones they are dissolved and their purulent character rendered evident by this reagent. Dr. Arango has sometimes made out crystals of a siliceous nature in the contents. He has found the tumours in all parts of the intestinal canal, even in the rectum. In no case has he found ulceration, whereas tuberculous affections of the intestine almost always undergo this change. Again, tuberculous disease of the intestine is most commonly secondary to pulmonary disease, but in the carcasses he has examined the lungs were comparatively rarely implicated, not nearly so often as the intestines; and when they were the lesion was almost always due to a parasite, a fluke being frequently found in the pulmonary cavities. It is worthy of remark in this connexion that in Bogota horses and donkeys are very subject to this parasitic affection of the lungs, but rarely suffer from phthisis. It has been remarked that whenever the lungs of the cattle are affected the liver is invariably very much diseased, the latter organ being more often affected. Thus in the year 1892 more than 16,000 carcasses were examined, the liver containing flukes in about one of every three carcasses, while the lungs were only affected in one in every thirty-four. The real nature of the intestinal tumours does not seem to have been satisfactorily ascertained, but Dr. Arango thinks that they are due either to some parasite or to a glandular cyst caused by the mechanical obstruction of the duct by particles of sand. It has been suggested that the fact of a large number of poor people in Bogota being phthisical is an argument in favour of tubercle existing in the meat; but Dr. Arango thinks that the miserable habitations, with an entire want of ventilation, and the wretched way in which these poor people live are a sufficient explanation of the prevalence of phthisis among them. He does not, indeed, deny the existence of tubercle among the cattle, but he is convinced that it is far more rare than in European cattle, and that it is commonly introduced when these latter are imported. The conditions of cattle life, however, are far less favourable to the development of phthisis than those existing in Europe, where cowsheds—often dirty and ill-ventilated—are much in vogue instead of the absolute open-air life of the South American ranch.

TREATMENT OF EPILEPSY.

IN the *Liverpool Medico-Chirurgical Journal* Dr. Alexander utters a word of warning against the indiscriminate use of bromides in cases of epilepsy, a warning which, we venture to say, is not unneeded. Nevertheless in the great majority of cases no other drug is so efficacious, and it is only in rare cases that it is completely contra-indicated. Dr. Alexander has observed good results from the combination of borax with bromides, especially with bromide of sodium. In twenty-six cases in which this combination was administered the fits were arrested for several months in nine cases; in seventeen they were diminished in frequency, while in one the attacks were uninfluenced, and in another they became more frequent. But perhaps the benefits of this treatment are more uniform in regard to the mental condition of the patients. Even in those who were subject to post-epileptic mental disturbance, and in others who remained dull and stupid for several days after a fit, the mental disturbances entirely disappeared. There are, however, certain drawbacks to the administration. The full dose sometimes produces gastric troubles, flatulence, and loss of appetite. But this inconvenience is usually got rid of by care in administering the drug after food, and by caution in increasing the dose gradually. Skin eruptions may also be produced, especially after continuous administration for some time. These may be accompanied by intolerable itching, but the eruptions are said to subside usually even without discontinuing the use of the drug. Loss of hair, which may be complete, is a much more serious inconvenience. Dr. Alexander's experience seems to confirm that of previous observers in regard to the efficacy of borax in certain cases of epilepsy.

THE STABILITY OF TALL CHIMNEYS.

IT does not require much technical knowledge to enable the reader to appreciate the causes of a recent chimney disaster at Huddersfield. The evidence of expert witnesses left no room for doubt as to their significance. A hollow cylinder of brickwork was built with a base alleged to be deficient by more than a third of its proper diameter. Its freedom of oscillation was dangerously restricted by adjacent buildings for the first thirty or forty feet of height, and finally was made to support an addition some thirty feet high. The inevitable consequence followed. The stalk, partly stiff, partly mobile, broke, and two lives were lost. The various errors of construction above-mentioned were noted in the

verdict of the coroner's jury which dealt with this case. On revising their decision, one point which strikes us as indicating a want of due deliberation is the fact that, while freely blaming the original structure, they have singled out for particular censure only the person who is responsible for the latest addition. The most practical of their recommendations, however, is that which advises the systematic inspection by the Board of Trade of all such tall chimneys. This task should prove neither a difficult nor a costly addition to the Board's present functions. Its fulfilment is evidently called for, and would much enhance the public sense of security. We would only add that such inspection, to be of any value, must be of no merely perfunctory character, but should include a specific statement of measures, and should also be subject to official supervision.

THE PREVALENCE OF INFLUENZA.

INFLUENZA still continues to prevail widely, and it seems now to have crossed the Atlantic and reached New York. In Great Britain the disease has apparently increased in virulence rather than otherwise, and in many districts has considerably swollen the death-rate. Numerous cases are reported to have occurred at the Ripley Hospital, Lancaster; and at the Royal Hospital, Stonehouse, a very large number of men and boys appear to be suffering from the disease. From Exeter, Bristol, Liverpool, and the Rhymney Valley a number of cases are reported, and in many parts of the country school attendance has been much diminished by the incidence of the disease upon children. In London during last week there were 127 deaths directly attributable to influenza, as against 22, 36, and 72 in the three weeks preceding. There would seem to be a special tendency for the disease in its present form to attack the pharynx and larynx, and these parts, in many cases, remain affected after all other symptoms have passed away. Those who were attacked in previous epidemics appear to be especially susceptible to the disease in the present outbreak, so that any protection afforded by one attack is apparently of short duration. In Germany a marked increase in the death-rate has been produced by influenza, and last month there were over 30 deaths in Berlin directly referable to the disease. Deaths are also reported from Amsterdam, Prague, and Moscow.

OBSERVATIONS ON PERIPHERAL NEURITIS.

IN the *Liverpool Medico-Chirurgical Journal* Dr. Alfred W. Campbell has published a series of observations which are particularly of interest in their pathological aspect. In recent years several observers have noted in fatal cases of peripheral alcoholic neuritis changes more or less obvious in the spinal cord and even in the higher centres, so that a widely prevailing belief has arisen that the disease is really characterised by widespread changes, probably the result of a poison, occurring in the nervous system as a whole. Dr. Campbell's observations certainly confirm such a view. He describes briefly the clinical histories of four fatal cases of alcoholic neuritis in which the diagnosis was confirmed post-mortem. One of these is of particular interest because the subject of it was a boy aged only six years and a half. Briefly, then, these cases are to be placed in the same clinical category as cases of polyneuritis alcoholica, and in all of them the nerves, muscles, and small bloodvessels showed characteristic changes. All of them, moreover, presented disease of the spinal cord and medulla—viz., a scattered degeneration in all the white columns, particular strands—the columns of Goll, and Burdach and Lissauer's root zones—having suffered in a marked degree. The widespread disseminated character of the degeneration is noteworthy. In no case did the degeneration follow physiological lines, and motor and sensory columns were alike affected. The nerve roots also were not unaffected for in the cervical and dorsal regions the anterior and posterior roots on both sides were altered, while in the lumbo-sacral segments the posterior roots were more particularly degenerated. These results are definite and interesting. The changes in the cord, as Dr. Campbell supposes, probably account for the ataxy which is sometimes present, and he is doubtless right in his contention that the widespread character of the changes and the nature of these make it likely that the alterations in different parts of the nervous system are independent of one another and are really the result of the influence of alcohol upon all parts of it.

THE DISCUSSION ON THE UNEMPLOYED.

WE shall not be expected to go into the political or economic problems involved in the discussion raised by Mr. Keir Hardie on the necessity of doing something unusual for the unemployed. All must sympathise with honest and industrious men without work to do. We think Mr. Hardie did not add much to the strength of his case by his allusion to the increase in the number of suicides. To do working men justice, they are too sensible and too manly for such a way out of misery. It is impossible to deny that many of the suicides that have occurred of late have had nothing to do with want of employment, but were the result of morbid sentiment and sensationalism. We think Mr. Balfour in his remarkable speech made too light of the importance of efforts, legislative and economic, to increase the attractiveness of the land as a source of occupation and employment. We must not withhold our congratulations to Sir Walter Foster on his able and sensible speech. He perhaps expects too much from the "letting of allotments," but, taken as a whole, his speech was sensible and statesmanlike, and shows that the chief reliance of British citizens must be on themselves and not on the State.

THE ABSENCE OF GLANDERS IN THE BRITISH ARMY.

WE lately had occasion to remark on the abeyance of glanders and farcy in the British Army. The absence of any infectious disease among animals depends primarily on the care with which it is kept at a distance by those responsible for their health and on their sanitary surroundings. The success of the Director-General of the Army Veterinary Department, Mr. Lambert, of his predecessor, and of their colleagues has certainly been very complete. The last case of glanders in the Army—i.e., in the troop horses, which average nearly 14,000 in number—occurred on March 28th, 1833—over five years ago. It is probable that such an immunity has never occurred in any army before, and shows the vigilance exercised in excluding infection and in maintaining ventilation and cleanliness in their stables. This is a comparatively easy matter when the officers of the Army Veterinary Department can select their own stables; but there are times when the mounted troops have to march over the country and are billeted in all sorts of stables, as in the colliery districts during the recent strikes. So far we have heard of no accidents of infection, and we sincerely trust that the long and creditable immunity from glanders and farcy of the horses of the British Army will be continued.

AMŒBIC DYSENTERY.

SINCE Dr. Councilman's important investigation into the subject of amœbic dysentery many cases have been fully examined and described, and much light has been thrown on the subject. Dr. Quincke, whose valuable researches on other subjects are well known, has lately described two cases which have come under his notice.[1] The symptoms were profuse diarrhœa and frequent tenesmus. The characteristic amœbæ

[1] Wiener Medicinische Wochenschrift, No. 45, 1893.

were found in the stools; they were about 12 μ to 20 μ in diameter, exhibited active movements, and consisted of well-marked "endoplasma" and "ectoplasma." Red corpuscles were frequently seen within them. The first case was that of a man who had suffered from the above-named symptoms for many years and had recently developed the complaint in Palermo. Calomel was administered, and the amœbæ disappeared temporarily from the stools, but soon reappeared. The amœbæ seemed to be encysted and showed very clear outlines. Dr. Quincke injected some of the organisms into the recta of cats, and in several instances a typical enteritis was the result. Eight of the animals died. The large intestine only was affected. The mucous membrane was hyperæmic and much swollen, there were some necrotic portions, and a few ulcers had formed. When the amœbæ were introduced through the mouth of the animals the results were negative. The second patient had never been out of Germany. The amœbæ were larger, their movements less active, and the granules were more marked; no red blood-corpuscles were found in them, but the organisms were encysted. Cats appeared to be immune against this variety, as when similar experiments were made no enteritis resulted. Dr. Quincke states that he has occasionally (nine times) found the amœbæ in the stools of healthy persons, but they were always scanty and were harmless to animals. He speaks highly of the use of calomel in the more severe forms of the disease.

DEATH OF MRS. ERICHSEN.

THE news of the death of Mrs. Erichsen will cause a pang of very genuine regret to many of our readers, who will deeply sympathise with Professor Erichsen in his irreparable loss. During the whole of his long and honourable professional career Professor Erichsen has been accustomed to dispense a lavish hospitality and to welcome to his house a large number of his professional brethren, both British and foreign. None who have partaken of his hospitality are likely to forget the winning and graceful kindness of their hostess, who was rarely absent on such occasions, and who was ever ready to welcome the professional friends of her husband and to entertain them with rare graciousness and a never-failing flow of kindness and merriment. Mrs. Erichsen had been in failing health for some time, and her end, though somewhat sudden at the last, was by no means unexpected. The funeral took place at the Hampstead cemetery on the 12th inst., and the large assembly of professional friends who met to express sympathy with Professor Erichsen and to pay a last tribute of respect to the deceased was a certain indication of the high esteem in which both were held. Among those who were present (in addition to many private friends) were Sir Richard Quain, Sir Alfred Garrod, Sir Henry Thompson, Dr. Hare, Dr. Ringer, Mr. Christopher Heath, Dr. W. Rickards, Mr. W. A. Meredith, Mr. A. Pearce Gould, Dr. Poore, Mr. Barker, and Dr. F. T. Roberts. Many others who were unable to attend sent their carriages, and the funeral *cortége* was of exceptional length.

ENDOCARDITIS AND MULTIPLE NEURITIS.

IN the *Boston Medical and Surgical Journal* there is a short *résumé* of a paper communicated to the recent meeting of the American Neurological Association by Drs. Lloyd and Riesman of Philadelphia on this subject. The first case recorded was that of a man who was admitted to hospital with a history of having suffered from a low kind of fever for three months. This was complicated with what was evidently an irregularly distributed inflammation of the nerves. There was an aortic murmur, and later a purpuric rash appeared. It was concluded that the condition was one of ulcerative endocarditis, with a secondary septicæmic neuritis. At the necropsy very large vegetations were found on the aortic valves and sections of different nerves in the areas affected showed the presence of neuritis. There was also slight sclerosis in the posterior region of the cord. In the second case there was ulcerative endocarditis present, with multiple secondary abscesses in the brain, an embolus in the left brachial artery and an infarct in the kidney. That there was neuritis in this case is not stated, and we hope that a fuller account both of this and of the case first referred to—a case of a peculiarly important character—than is furnished in the report of the proceedings in the journal alluded to will be available. Any carefully observed cases which add to our knowledge, whether clinical or pathological, of multiple neuritis are at this juncture peculiarly important.

A PARLIAMENTARY MEDICAL SERVICE.

THE diabolical outrage at the Chambre des Députés has been followed by something like a scare in the Continental Legislatures, with the result of putting *en évidence* a functionary whose existence was hardly even suspected, but of whose usefulness there seems, in the said Legislatures, to be a lively appreciation. The functionary in question is the medical *attaché* of the Corps Législatif, Camera dei Deputati, Diet, Reichstag, or whatever other name European Parliaments are known by. He was promptly in attendance on Saturday, the 9th inst., in the French Chamber, and with or without assistance rendered admirable service in treating the injured deputies, calming their minds, allaying panic, and, in a word, restoring the house to the temper befitting the law makers of the nation. Already we hear that the same functionary has been called into requisition in other legislative bodies with a view to his having all his resources available should the French *attentat* have its imitations. From Rome it is announced that "il Dottore Cernelli, medico della Camera, si recò a Monte Citorio a visitare minutamente la Farmacia della Camera e gli apparecchi di chirurgia" (Dr. Cernelli, medical officer of the Chamber of Deputies, repaired to Monte Citorio, to inspect minutely the dispensary and the surgical armentarium attached to the house). The anarchist movement has undoubtedly reached a stage on the Continent which puts their Legislatures on the watch and prescribes the promptest and most effective means of remedying the cruel injuries which anarchist warfare is calculated to inflict. Short of actual prevention of these outrages, the employment of a sufficient corps of medical officers is about the best safeguard a Continental Parliament could adopt. It robs an explosion of much of its terrors and its projectors of their savage confidence in its efficiency. One motive the less is thus afforded the bomb-manipulator for his inhuman practice, in which repeated failure or disappointingly ineffective results cannot but reinforce the deterrent influence of the swift and summary retribution of the law.

OSTEOMYELITIS AFTER TYPHOID FEVER.

IN the course of a paper on the Sequelæ of Typhoid Fever Drs. Widal and Chantemesse[1] draw special attention to the occurrence of cold abscesses and osteomyelitis. The former they consider are caused sometimes by ordinary septic organisms, but sometimes are specific, being due to the pathogenic bacilli of typhoid fever. With regard to osteomyelitis, they remark as follows: the bacillus of typhoid fever, after causing the primary disease, may give rise to chronic local affections, which are apyretic and produce no constitutional manifestations; they may last for long periods and closely resemble the bony lesions due to tuberculosis, for the osseous tissue is that most commonly attacked. The age of the patient and the character of the primary disease are the most important etiological factors. As a rule young adults

[1] L'Union Médicale, Nov. 28th, 1893.

suffer most, although occasionally the condition is seen in patients of a more advanced age. Osteomyelitis is most frequently seen at the end of an attack of enteric fever which has been unusually prolonged and is generally not noticed until convalescence has been well established. The tibia is the bone most often affected (twelve times out of fourteen cases), but other bones may be separately or contemporaneously attacked with the tibia. The lesion is nearly always situated at the surface of the bone, the two foci of election being the deeper layers of the periosteum and the compact tissue of the diaphysis. The exostoses may exist for a long time without causing suppuration, but occasionally a large quantity of pus collects. There is always a considerable amount of pain, especially at the onset of the malady. In some cases a simple incision over the swelling is sufficient to effect a cure, but more often a fistula continues for some time, and in such cases an operation for removal of dead bone has to be performed before complete healing will take place. The prognosis after suppuration has occurred seems to be invariably good even when the lesions are multiple.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE annual general meeting of the constituents of this fund will be held in the Egyptian Hall of the Mansion House, E.C., on Tuesday, Dec. 19th, at 3 P.M. The business of the meeting will be: (1) to receive the report of the council for the year 1893; (2) to elect the council for the year 1894; (3) to determine the date of next Hospital Sunday; and (4) to transact annual general business.

FOREIGN UNIVERSITY INTELLIGENCE.

Vienna.—Dr. Stellwag von Carion, the *doyen* of German ophthalmologists, proposes to retire from his professorship at the termination of the current semester. Drs. Kaposi and Neumann, who have for many years been Extraordinary Professors of Dermatology and Syphilis, have been raised to the rank of Ordinary Professor. Some excitement has been caused amongst the students by the alleged severity of the examinations in midwifery, though it is stated that only 13 per cent. of the candidates were rejected. Complaints are made that the number of students in the two obstetric clinics is too great, and it is hoped that a third clinic may be established for them, whilst it is expected that two sessions' attendance on this subject will be required instead of one only as at present.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Peter Antonovich Spiro, Professor of Physiology in the University of Odessa, at the age of forty-nine.—Dr. V. J. Persidski, a Moscow physician of great repute in children's diseases.—Dr. Eugenio Rivera y Reina, Professor of General Pathology in Cadiz.

LAST week's issue of our contemporary the *Münchener Medicinische Wochenschrift* contained a full biographical sketch of the late Sir Andrew Clark from the pen of Dr. Hermann Weber. A portrait of the English physician was also issued with the journal.

AT a meeting of the Election Committee of the Middlesex Hospital on Dec. 14th Mr. C. E. Leopold B. Hudson, F.R.C.S., was elected Aural Surgeon in the place of Mr. Arthur Hensman, deceased.

THE editor of the Russian *Grazhdanin* has been sentenced to ten days' imprisonment for defamation of military surgeons.

THE LATE PROFESSOR TYNDALL.

PROFESSOR JOHN TYNDALL, whose death, in the fulness of years, we had occasion to note in THE LANCET of last week, was descended from a family who, at the close of the seventeenth century, made cloth and possessed mills in the dales of Gloucestershire. It is by no means improbable that he was connected, as he himself thought, with William Tyndale, or Tindall, who gave the English people the first translation of the Bible, and whose body was burnt, perhaps recognising in the old divine some kindred points of character to himself in his energy, strong will, and love of truth for truth's sake. However this may be, the forefathers of John Tyndall left the fertile vales of Gloucestershire about two centuries ago to settle in the plains of Carlow. The branch of the family to which he belonged does not appear to have prospered, but became small tradesmen, residing in the little village of Leighlin Bridge, on the Barrow, near Carlow. He was born in 1820, and when a boy was fond of athletics, and proved himself to be an expert climber, a good swimmer, and a swift runner, and he could hold his own in a fair fight. In after years he distinguished himself as an Alpine climber, and was the first to scale the Weisshorn. His father, recognising the value of education in the fight for life, sent him, for a time at least, to the Kildare-street Schools at Belfast, where he remained till he was eighteen years of age, and where he had the father of Sir Wm. Thompson, who was then professor of mathematics in the Belfast institution, as a teacher, and he long afterwards remembered that even at this early period he was deeply interested in an account he read of Davy's researches on radiant heat. His first serious attention to study was under a clever teacher of a National School named John Conwill, with whom he mastered Euclid, some algebra, conic sections, and plain trigonometry. On leaving school in 1839 he attached himself as civil assistant to a division of the Ordnance Survey, where for five years he had the opportunity of learning exactitude in making observations and accuracy in recording them under the able supervision of the late General George Wynne, R.E. As it seemed to be likely that he would become a civil engineer, the next four years of his life were occupied with work on railways. His work here was very severe.

In 1847, an opening having presented itself at Queenwood College, he accepted it, and became associated with the distinguished chemist, Dr. Edward Frankland. In the following year he joined Dr. Frankland in an expedition to Marburg in Hessen-Cassel, studying chemistry under Bunsen and physics with Knoblauch. Here, while working hard, he found time to supply English readers with an excellent translation of Clausin's memoir, "On the Moving Force of Heat." In 1851, leaving Marburg, he went to Berlin to study under Professor Magnus, and here it was that Dr. Du Bois Reymond one day placed in his hands a pamphlet, with the remark that it was the production of the first head in Europe since the death of Jacobi, and was deserving of translation into English. It was "Die Erhaltung der Kraft," or "The Conservation of Force," of Helmholtz, a work that has had far-reaching issues. The first original investigations undertaken by Tyndall were made during his German student-life, and his graduation thesis was a mathematical dissertation on Screw Surfaces. His first physical paper was on the Phenomena of a Water-jet, and it is not surprising that with Bunsen and Magnus as his teachers he proceeded to investigate the relations of simple and compound gases and vapours to radiant heat. Returning to England he tells us that in 1850 he stood with one of the papers he had written in conjunction with Knoblauch for the first time in the bright presence of Faraday, whose life he long afterwards wrote. In the following year he became attached to the Royal Institution. In 1852 he was elected at the comparatively early age of thirty-two a Fellow of the Royal Society. In February, 1853, he gave his first Friday evening lecture at the invitation of Dr. Bence Jones, and three months afterwards, on the motion of Faraday, the old chair of Natural Philosophy, which had been filled at the beginning of the century by Thomas Young, was revived, and Tyndall, also on the motion of Faraday, was elected to fill it. This was probably a turning point in Tyndall's career, for Professor Huxley, in his autobiography, informs us that in the course of this year both he and Professor Tyndall were unsuccessful candidates, he for the chair of Natural History,

and Tyndall for the chair of Physics in the University of Toronto. Faraday died in 1867, and Tyndall became Resident Director, a post that he held for twenty years. The papers he then published appeared in the Philosophical Transactions. They dealt with Sound, Diamagnetism, Glaciers and Ice, Radiation and Absorption of Heat, and with Calorescence. He showed that the chief absorbing action of the atmosphere on non-luminous heat is due to its aqueous vapour, which enabled him to explain various meteorological phenomena, such as the great daily range of the thermometer in dry climates, and the production of frost at night in sandy deserts like the Sahara. He discovered the means of separating the invisible from the visible radiations, and made the daring experiment of placing his eye at a focus of dark rays capable of heating platinum to redness. In 1866 and following years his attention was largely engaged in examination of heat of high refrangibility. The removal of aerial impurities required in this investigation led to an independent research branching out into various channels; for, on the one hand, it dealt with the very practical problem of the preservation of life among firemen exposed to smoke, and, on the other, it approached the recondite question of spontaneous generation.

Many other subjects were carefully investigated, and became the topics of a Friday evening discourse, or were published in different journals. Thus, in 1853, he studied the Transmission of Heat through Organic Substances; in 1854, the Vibrations due to Contact of Bodies at Different Temperatures; in 1855 there appeared his Researches on Diamagnetic Force; in 1856 he took up the subject of Slaty Cleavage; in 1857-58, the Physical Properties of Ice and Glaciers; in 1859-63, the Absorption and Radiation of Heat by Gases; in 1865, Calorescence; in 1866-67, the Action of Heat of High Refrangibility; in 1868-69, the Formation of Clouds, with the Colour and Polarisation of the Sky; and, in 1870, Dust and Smoke Respiration. Besides all these, he found time to write works that have become quite classical—on Heat, a Mode of Motion, on Sound, and on Light.

In 1875 and 1876 he threw himself with characteristic ardour into the discussion in regard to spontaneous generation, which was then at its height, and of which his experiments led him to become a vigorous opponent. His observations, both at Sandy Hook, in America, and off the South Foreland, upon the acoustic transparency and opacity of the air were very original and valuable. He showed that, in opposition to generally accepted statements, rain and fog have little influence upon the propagation of sound; that water in the form of vapour has a most potent effect in the stoppage of sound; and he strongly recommended the employment of the syren and of foghorns as fog signals. Tyndall was the prince of experimenters. His experiments always succeeded. No hitch, no bungling, no inaccuracy ever marred their effect. Like his great master Faraday, he had the art in lecturing of making a difficult and apparently uninteresting subject seem easy, and his hearers left the theatre with the pleasant conviction that they had long been familiar with what had been so clearly stated and illustrated. It was only right, and his just due, that the managers should show their appreciation of his merits by electing him honorary professor, a title that had been bestowed on Davy and on Brande, and by naming one of their annual courses of lectures the Tyndall Lectures, and his bust adorns their hall.

It speaks well in a man's favour when his friends are numbered amongst the best and wisest of his generation. He tells us that through three long cold German winters Carlyle used his tub at five o'clock every morning, even when ice was on its surface. With Darwin he was intimate. With Huxley he early became acquainted, and in 1856 he visited the Alps with him, the result of which was a joint work on the structure and motion of glaciers; and he was well known, of course, to all the directors of the Royal Institution and to many members of the Royal Society. The key-note of Tyndall's work was that the true student of science should have no practical ends in view, no feverish desire for money-getting or to enrich himself or others, but should pursue science for its own sake and leave the practical application of his discoveries to others. His lectures, from their novelty and interest, attracted great attention in America in 1873. The liberality of his disposition and his genuine desire to promote the interests of science are sufficiently attested by the fact that, after deducting the actual expenses of his American lecturing tour, the remainder of the money he received was handed over to the Harvard, Columbia, and Pennsylvania Universities for the encouragement of those students who devoted themselves to original research. He had withal a vein of humour, for being once in the company of a man of great gifts and acquirements, and the subject of theology being under discussion, on which their differences were as the poles asunder, his friend turned to him, saying, "You surely must have a theory of the universe?" as if it were certain that he must have in one way or another solved the mystery of mysteries. "I have not even a theory of magnetism" was Tyndall's quiet rejoinder. He did not pass quite unscathed through his long and active life. As might be anticipated he met with some formidable criticism; but, on the whole, he may be fairly said to have borne himself bravely in the fight.

A complimentary dinner was given to him in 1887 on the occasion of his retirement from the chair of Physics, at which nearly every branch of science was represented, Professor Stokes occupying the chair. He was honoured with the LL.D. of Edinburgh and with the D.C.L. of Oxford, and his talents received abundant recognition from the learned societies of the Continent.

No notice of his life, however brief, should omit mention of the interest he took in Switzerland and the frequent visits he paid to it. He had a chalet on the Bel Alp, where he spent many months and where he studied with scientific care the structure of the mountains and the movements of the glaciers. Born and bred in Ireland at a time when religious animosity was great, he early learned the essential differences between Protestantism and Catholicism, and battled for his own opinions in many a fierce controversy. He often entered in his later years into political strife, and expressed himself in the terms that are natural to strong convictions but are scarcely becoming to the calmness and serenity of the scientific mind. In person he was of middle height, spare form, wiry, and active in movement. His face was expressive, with prominent nose, rather close-set blue eyes, wide mouth, and thin cheeks. His articulation was clear and his words apposite to the subject.

THE OPIUM COMMISSION.

THE Indian Section of the Royal Commission on Opium commenced its labours on Nov. 18th, under the presidency of Lord Brassey, in the council chamber of the Bengal Secretariat. In opening the proceedings Lord Brassey urged that the active interest which had been shown in England on the opium question should be accepted as evidence of the deep concern which is taken in all questions affecting the good government of India. "Never," he said, "has that feeling of interest in India, and sympathy with and regard for the people of India, been more strongly felt than at the present time. In any action which may be taken on the subject before us we are expressly charged with the duty of ascertaining the opinions and wishes of the natives of India. ..... In the present state of opinion in England, where we see men in the position of archbishops and bishops and the late Cardinal Manning admitting themselves ignorant of the facts, and urging the Government to give the lights of an exhaustive and impartial inquiry, it must be recognised that the decision to have a Royal Commission was inevitable."

During the three weeks that the Commission has been sitting much evidence has been given by its opponents to show that opium is not a prophylactic against fever. The Rev. Mr. Estans, a missionary for nearly forty years, stated that the general feeling in all the villages he had visited was in favour of prohibition. The Rev. Mr. Phillips, of the London Missionary Society, had never heard that opium was a protection against fever, and suggested a tax on tobacco to supply the loss to the revenue. The efficacy of opium in malarial fever was denied by Dr. Wallace, a medical practitioner of Calcutta, and he thought the sale should be strictly limited. One witness stated that the gradual diminution of the area of cultivation would not satisfy the anti-opium party, as they regarded the trade as immoral.

On the other side, the evidence given by Sir David Barbour showed that the moderate and regular use of opium was not injurious, but often positively beneficial. The prohibition of the cultivation of the poppy would excite the gravest discontent, and be a serious injury to the districts where it was pursued. It would be impossible to carry on the administration if the opium revenue were lost, and he would not face the consequences of the taxation which would

have to be imposed to make good the loss. The Secretary of the Bengal National Chamber of Commerce said that the consumption of opium was common to all classes in Bengal, especially in malarial districts, and there was a general impression bordering on conviction that its moderate use was beneficial and tended to prolong life. Not a single crime could justly be ascribed to it, and its abuse was less harmful than the abuse of alcohol. The Hon. D. R. Lyall, a member of the Bengal Revenue Board, gave similar testimony, as did also Mr. Westmacott of the Presidency Division, who looked with suspicion on information collected by missionaries, who accepted evidence without proper check. Sir John Lambert, Commissioner of the Calcutta Police, was unable to discover any connexion between opium and serious crime, and his evidence was corroborated by Mr. Wilcox, district superintendent of police, and Mr. Dawson, superintendent of the Preventive Service. The evidence given by Mr. James Monro, formerly Chief Commissioner of Police in London, was to the effect that opium did not cause any general demoralisation. Worse evils would result from Government restrictions, and he complained that the anti-opium party allowed their strong moral convictions to overcome the discretion of Christian charity. The evidence given by the medical profession was, with but few exceptions, in favour of the use of opium. Surgeon-General Rice, who has been in charge of gaols for more than twenty years, was convinced of the beneficial effects of opium in malarial districts. Dr. Maynard, medical officer at the Patna factory, said that opium was used as a popular domestic remedy by people beyond the reach of medical advice. He had seen no ill effects from it. Dr. Harvey, Inspector-General of the Civil Hospitals of Bengal, stated that many of the great business men of Calcutta were habitual opium-eaters, and did not suffer from it. Its moderate use had no effect on the moral character, and excess did not lead to violent crime. He regarded opium as one of the greatest blessings enjoyed by mankind. Dr. Crombie during twenty-one years' service had rarely seen any ill-effects from the consumption of opium; it certainly was beneficial in many diseases. Dr. Russell believed that in malarious districts opium led to a long and happy life. Miss Hamilton, M.D., had never seen any ill-effects from opium in women of the upper classes among whom she practised. Dr. Ferriss, a practitioner in Calcutta for thirty-eight years, thought that it distinctly decreased mortality. Opium eaters were generally healthy men, and contrasted favourably with non-opium eaters. Dr. Lethbridge, superintendent of the Thugge Department, said that a long experience of gaols had satisfied him that opium was not generally injurious, and had little or no connexion with crime. Dr. Kailas Chunder Bose, president of the Calcutta Medical Society, said that nearly 20 per cent. of the population of Calcutta habitually took opium in some form. It had no deleterious effects upon the health of habitual consumers, but rather conduced to old age when used in moderation; it was a social necessity.

A letter addressed to the Government by the Bengal Chamber of Commerce states that no internal sources of taxation exist which could replace the loss to the revenue which would be caused by the prohibition of the cultivation of opium, and goes on to say that not only would India look to England for recompense but that native chiefs and landlords would expect compensation, as would also France and Portugal for the loss to their Indian Colonies. It is estimated by the Chamber that £300,000,000 sterling would not suffice to meet the capitalised value of these claims. The opinion is also expressed in the letter that interference with the existing system is unnecessary and would only be mischievous, while abolition would revolutionise the attitude of the people towards the Government and produce unappeasable discontent and disaster. The letter concludes: "The Commission cannot but appear to the people of India to proceed upon dangerous and offensive grounds, and there is nothing in its appointment calculated to conciliate, while there is everything to alarm, the jealous and fanatical suspicions of the population."

The Calcutta section of the Commission has adjourned till Dec. 20th.

THE ROYAL COMMISSION UPON VACCINATION have now at last, concluded the evidence. Dr. Birdwood, of the Metropolitan Asylums Board, was under examination. The Commission, after taking evidence for a period extending over five years, adjourned till the New Year, when they will assemble to consider their final report.

MUSEUM OF HUMAN ANATOMY AT CAMBRIDGE.

FOLLOWING upon the account of the Pathological Museum in the *Cambridge Review* by Sir George Humphry, of which we recently gave a notice, there is a short account of the Museum of Human Anatomy by Professor Alexander Macalister in the same periodical. After a brief statement respecting the origin of the collection he says that it was largely augmented in 1836 by the purchase of a valuable museum, upon the formation of which Professor Macartney of Dublin had spent twenty-one years. This remarkable man had spared neither time nor labour in the collection of specimens and the making of preparations for his museum. He had intended to leave behind him in Trinity College, Dublin, a monumental museum comparable with that made by John Hunter, but, having the misfortune to possess an independent spirit and a sarcastic tongue, he had incurred the enmity of the Board of Trinity College and of his colleagues, by whom he was subjected to constant petty persecutions, which led to his resigning his professorship in 1836. Professor Macartney had carefully safeguarded his private rights in his museum, as he had in early life learned a bitter lesson in this respect. When he was demonstrator and lecturer at St. Bartholomew's Hospital, he had made a valuable set of preparations to illustrate his lectures on comparative anatomy, but these, when finished, were taken possession of by the members of the hospital staff, who appropriated to the institution the fruits of several years' labour. Having thus been once bitten, he was careful to preserve his rights of proprietorship in the large collection which he made while professor in Dublin. On resigning his chair he offered his museum for sale to that university, but the latter would not buy. Professor Clark of Cambridge, who had visited the museum some time before, at once offered to purchase it, and through his exertions it was secured for the University of Cambridge, which granted Professor Macartney an annuity of £100 a year for ten years in payment for it. The collection is now permanently housed and displayed in the large museum room which occupies the first floor of the new Anatomy Building. This is a large room, 70 ft. long by 40 ft. wide, and is divided into four parts: the main museum, the gallery of models, the gallery of soft preparations, and the bone-room. The wall cases in the museum contain preparations illustrative of the formation, structure, and varieties of bones, joints, and muscles. The osteological portion of this series is one of the largest and richest collections in Great Britain. The gallery of models contains a considerable number of specimens for purposes of teaching, made in Paris and Leipzig, and purchased chiefly by Sir George Humphry.

The chief attraction of the museum is the magnificent collection which it contains of human crania. These occupy four large cases in the middle of the floor of the museum and a portion of one of the wall cases. This collection is the second largest in Great Britain. In the old museum there were about thirty skulls, collected by Collignon, Harwood, and Professor Macartney. To these Sir George Humphry added by purchasing the great collection of Ancient British Skulls which had been made by Dr. Thurnam, chiefly from the barrows in Wiltshire, and which includes most of the original specimens figured in the "Crania Britannica." Sir George Humphry also added by purchase a fine collection of the deformed skulls of the ancient inhabitants of Peru, collected by Consul Hutchinson, and a large number of the skulls of Flat-head Indians from North-West America.

Within the last ten years the collection has been trebled in size and in value. Through the instrumentality of Dr. Budge of Christ's College a splendid series of Egyptian heads, nearly 500 in number, has been added, and some of these are in such a good state of preservation that they show the peculiarities of feature and *coiffure* which these Egyptians presented several thousand years ago. There has also been a large addition made to the Ancient British Collection from the various prehistoric and early historic localities in the eastern counties. This series furnishes a most valuable set of materials for the study of the physical characters of the successive races who peopled this portion of Great Britain in the neolithic, the bronze, the Roman, and the Saxon periods. The increase of this department of the museum is greatly to be desired, and it might easily be made the best collection in Great Britain, if not in Europe,

were graduates of the university scattered throughout the world to coöperate in sending specimens. As it is, Cambridge has ample materials to illustrate the subject of anthropology. This branch has now been recognised as a subject of university education in the Natural Sciences Tripos and is each year the subject of a course of lectures which is well attended. If the lacunæ in this collection were made up by the efforts of Cambridge men abroad, so as to make the museum thoroughly representative, this addition to the equipment of the School of Anthropology would assuredly give it a position of considerable importance.

The museum is already indebted to several friends in foreign countries for valuable donations, and it is desired to interest as many as possible in this portion of the work.

CHOLERA.

ACCORDING to telegraphic communications from Athens it would appear that there had been a sharp outbreak of cholera at Salonica, where there were recently twenty-four cases, of which eight proved fatal. The disease is stated to have appeared in the military hospital there. All direct traffic over the Turkish frontier has been prohibited, and ten days' quarantine has been imposed on arrivals from Salonica. The disease is stated to exist in Constantinople itself at the present time.

There has also been a recrudescence of cholera in Sicily, a few persons having, it is reported, been attacked in Palermo several weeks after the disease had quite disappeared from that city.

The weather has been unusually mild of late in Russia, and coincidently with the thaw which occurred in St. Petersburg there has been some reappearance of cholera. Thirty-eight cases and 15 deaths were reported in that city on the 11th inst. after the disease had been absent for some time. A few cases have also been reported at Odessa and Yalta.

CHOLERA IN FRANCE.

(FROM OUR SPECIAL CORRESPONDENT.)

The Total Number of Deaths for the year 1893.—The Marseilles Epidemic.—The Towns that suffered most.

THOUGH there are still occasional cases of cholera in the department of Finistère, the disease as an epidemic has ceased in France. I can now, therefore, give a summary of the effects produced by the epidemic during the current year. In THE LANCET of Aug. 5th it was stated that there had been during the present year, up to the end of July, 1530 deaths in France attributed to cholera. These were officially entered as such in the death register. This number did not, however, include the 102 deaths due to the epidemic of cholera which occurred at Marseilles in February. The records of that epidemic, about which a great mystery had been maintained, were not included in the official figures then given. I have now been able to ascertain from the most reliable sources the course of the epidemic since last July. In the month of August 536 deaths from cholera were officially recorded. During September there were 660 deaths. It was not until October that the epidemic abated, during which month 152 deaths occurred. The total for November was only 14. This gives a grand total of deaths from cholera in France during the eleven months from the commencement of January to the end of November, 1893, of 2994 deaths. The deaths due to cholera which have occurred in the department of Finistère during the month of December will bring the number to a little above the round figure of 3000. For all practical purposes it will suffice to say that the deaths from cholera in 1893 amounted to 3000. This shows a considerable improvement on the figures of the previous year, when the deaths from this disease in France amounted to 4542, the town of Havre suffering most. This year the greatest number of deaths have taken place in Marseilles. In that port there were 102 deaths in February. The epidemic broke out anew in May, and since May 5th there have been 767 deaths from cholera at Marseilles; or a total for the whole year of 869 deaths. This is a fact that should be taken into consideration by all the Powers that have adhered to the Dresden Convention. In October, 1892, the first epidemic of cholera broke out in Marseilles. There were only 87 deaths, yet the disease was officially declared to be epidemic. The Minister of the Interior caused an official inquiry to be held. Sanitary measures were taken and disinfection was enforced, but this year, though the epidemic was much more serious, its existence was not officially declared; therefore, according to the French law, disinfection could not be enforced. No official inquiry was held, and in disregard of the stipulations of the Dresden Convention the foreign Governments were not notified that cholera prevailed in Marseilles. There is good reason to believe that this inconsistent attitude of the authorities was due to certain political influences which ought not to have in any way interfered with the carrying out of those sanitary measures that are not only recognised as necessary but are sanctioned by the law. Though this year there have been, as already stated, 869 deaths from cholera in Marseilles, disinfection could not be enforced—it could only be suggested, and I know of several instances where it was refused. The measures taken when in October, 1892, the epidemic caused only 87 deaths were not renewed in February and during the summer of 1893, though the epidemic was of a much more serious character. That the measures of precaution which might otherwise have been applied in Marseilles would probably have saved many lives seems to be indicated by the remarkable exemption of the Parisian population from the disease. After the numerous cases which occurred in 1892 it was natural to expect a recrudescence of the epidemic this year. I am assured, however, that during the whole of this year there have been but 12 deaths from cholera in Paris. All these patients were, however, removed to hospital and isolated, and their habitations were disinfected. Had similar precautions been taken in Marseilles that town might not have suffered so severely.

After Marseilles, the largest number of deaths occurred at Nantes—namely, 478. In the department of Finistère, where the disease still lingers, there have been, in all, 773 deaths from the beginning of January to the end of November. This department includes the ports of Lorient, Quimper, and Brest, and here, as in Marseilles, sanitation is notoriously ignored and neglected.

Cholera on the Riviera.

Little or nothing has been said during the course of the year as to the prevalence of cholera at or in the neighbourhood of the most frequented and popular winter resorts of France, if not of Europe. Fortunately, there has been but little cholera on the Riviera; still, it is notorious that there were some cases. As the drainage and general sanitary condition of even some of the most popular health resorts are very defective, the mere mention of the word cholera is likely to create considerable alarm. Exaggeration is the natural consequence of alarm, so that it is best, in the interest of the Riviera itself, to state the full truth; and after some difficulty I have succeeded in obtaining the exact, or rather the official, figures. With respect to Marseilles, the facts have already been given; but Marseilles is not a health resort, and, though geographically on the Riviera, no persons in search of health stop at Marseilles, nor do patients go to Toulon, but most people who stay at Hyères visit the celebrated arsenal town and go there for shopping purposes. It was on June 3rd that the first death from cholera was recorded at Toulon, and during the month 30 deaths occurred. In July there were 25 deaths, and in August 4 deaths. It will be remembered that in a number of places round and about Toulon further deaths from cholera occurred. Hyères, which is so close to Toulon, did not escape. According to the official record there were 5 deaths from cholera in this pleasant winter station during the month of June, 12 in July, and 1 in August. What is far more serious is the number of cases which occurred at Nice. Here, also, July was the worst month. There were 6 deaths in June, 70 in July, and 4 in August. This is more serious, and these figures should awaken the local authorities to the

necessity of taking measures to push forward actively the sanitary works now in contemplation. Finally, and though I have no official figures that I can quote, still I am assured, on good authority, that there have been a few cases of cholera in the Principality of Monaco. Here, again, the need of better drainage, especially in the Condumine district, is very urgent.

With respect to the cholera which prevailed at Toulon and Nice and in its neighbourhood, the disease was conveyed through the adjacent departments of the Var, the Alpes Maritimes, and Basses Alpes in a manner that is certainly instructive as well as interesting. In the month of September there were extensive military manœuvres throughout the region between Nice and Digne. Such manœuvres represented the defence of the Alps against a possible Italian invasion. It is not surprising, therefore, that the military authorities thought more about strategical than sanitary measures. This is excusable, as there has been considerable tension of late in the relations between Italy and France. Consequently no exceptions were made in calling out the reserves. It did not matter whether they came from cholera-infected districts or not, the reserves all took their place in the ranks. Previously to the assembling of the reserves there had been numerous cases of cholera, not only at Nice, but also at Manosque and at Saint Tulle. The reserves from these districts were incorporated in the 55th and 112th Regiments of the Line, and early in September there were numerous cases of cholera in both these regiments. The manœuvres were not, however, interrupted. The troops were ordered to march upon the town of Digne in two parallel columns; but as the columns pushed their way forward they had to leave invalided soldiers in almost all the towns or villages through which they passed. Thus soldiers suffering from cholera were left by one of the columns at Antrevaux, Annot, and Saint-André; while the other column, travelling along a parallel but more southerly route, left its sick at Castellane and Senez. At each of these places the disease broke out among the inhabitants immediately after the troops had passed through the towns. At Castellane a battalion of the 55th Regiment suffered so severely from cholera that a halt had to be ordered and the troops encamped on an elevated site.

Further on the two roads converge at Barrème, a small town, where about 2000 soldiers arrived on Sept. 9th. These men were camped on the highest part of the commune, and some trenches had been dug to serve as latrines, but the place selected for this purpose was a few yards above the ground where there is a spring which provides water for the principal pump of the town. On Sept. 15th cholera broke out among the inhabitants of Barrème who were in the habit of drinking the water from this pump. Those who drank water derived from other sources were absolutely exempt from the disease. Cholera first occurred on the morning of Sept. 15th, just six days after the arrival of the troops and the fouling of the latrines close to and above the spring. The same evening there were 29 cases of cholera among the civil population of Barrème, and of this number 14 died after a few hours' illness. On the next day there were 45 cases and 22 deaths; but more terrible than these figures is the fact that the district affected had only about 150 inhabitants. Thus, half the population who drank the water from this particular pump contracted the disease. Succour for the sick was promptly organised, and, as the cause of the epidemic was self-evident, the remedy was quickly and easily applied. The latrines were filled up and disinfected; and the pump was closed and the inhabitants were forbidden to use the water. Every house or cottage where cases had occurred was disinfected, and the epidemic at once ceased.

There were further cases of cholera beyond Barrème, notably at Mézel and at Digne; but by the time the troops reached these latter places the alarm concerning the danger had already spread them. The inhabitants began to protest, and at last even the military authorities were persuaded to take some precautions. The troops were not allowed to enter the towns, but were compelled to camp outside on carefully selected sites. Thus it will be seen that the outbreak of cholera which occurred at Nice and elsewhere was not confined to these towns, but was carried inland and spread in mountainous and sparsely populated districts by the soldiers of the reserve forces. The means by which the infection was conveyed in this case were very clearly shown; and it is probable that but for the autumn military manœuvres the towns and villages in question would not have suffered from the disease.

CHOLERA IN RUSSIA IN 1892 AND 1893.

THE statistics of this year's epidemic of cholera in Russia have been completed up to Sept. 4th. For the sake of easy comparison the Medical Department, in its last monthly report, has published in parallel columns with these statistics the figures of last year's epidemic up to the same date in that year. The figures are of considerable interest, as they show in a very clear manner that those districts which suffered the most severely last year have been visited with the lightest loss in the present year, while those governments which this year have furnished the largest numbers of cases and deaths had, in many cases, escaped altogether up till the date named last year. This tendency of cholera to spare, in the second year of a pandemic outbreak, regions where it had most prevailed in the first year has been observed in earlier epidemics. In the present instance the principle is most strikingly illustrated in the governments of Astrakhan, Saratof, Voronezh, Samara, Simbirsk, the Don Cossack territory, all the governments of the Caucasus, and the Siberian governments of Tobolsk and Tomsk. On the other hand, Podolia, Kief, Tula, Minsk, Grodno, and some other governments, where cholera was either absent or almost absent last year, have suffered comparatively heavily this year. The totals for the two years show a striking diminution in the second year. The total number of cases recorded in 1893 is approximately one-seventh of those recorded in 1892, and the number of deaths rather less than one-ninth. The mortality rate has thus also declined from 49·6 per cent. in the first eight months of 1892 to 39·1 per cent. in the same period of 1893.

Table of Cases of Cholera during the Years 1893 and 1892.

Name of Government.	1893		1892	
	Cases.	Deaths.	Cases.	Deaths.
Astrakhan	360	189	17,439	10,939
Vilna	8	4	—	—
Volhynia	1,221	452	—	—
Grodno	1,223	461	33	14
Kief	5,151	1,874	864	283
Minsk	969	383	1	—
Mogilef	1,686	606	12	5
Orenburg	9	1	4,419	2,180
Podolia	15,679	5,252	—	—
Warsaw	18	11	—	—
Kalisz	317	164	—	—
Lomza	452	251	—	—
Plock	4	1	—	—
Radom	51	31	—	—
Bessarabia	453	212	68	23
Vladimir	1,255	469	224	129
Voronezh	1,948	994	16,952	8,239
Viatka	587	274	9,506	4,360
Ekaterinoslav	924	415	2,747	1,124
Kazan	1,518	614	8,102	3,732
Kaluga	115	57	3	3
Kostroma	318	125	287	130
Kursk	3,229	1,240	4,862	2,079
Moscow	2,611	1,109	758	341
Nijni Novgorod	2,168	1,053	3,822	1,618
Novgorod	7	6	8	8
Orel	4,922	1,802	511	294
Penza	64	26	4,097	1,663
Perm	131	60	2,682	1,311
Poltava	900	437	524	216
Riazan	138	68	1,124	544
Samava	1,102	468	29,755	13,819
St. Petersburg	597	189	4,731	1,179
" (City)	424	160	3,328	982
Saratof	534	198	32,838	14,563
Simbirsk	461	191	13,419	5,467
Smolensk	11	8	—	—
Taurida	533	277	1,151	593
Tambof	318	147	12,189	5,227
Tver	12	7	46	15
Tula	2,792	860	796	209
Ufa	364	154	5,743	2,486
Khaikof	874	438	5,513	2,201
Kherson	867	398	367	130
Tchernigof	779	261	303	67
Yaroslavl	684	309	1,032	450
Baku	7	2	10,344	6,291
Elizavetpol	22	9	8 580	5,007
Kuban	421	270	27,596	15,047
Kutais	96	52	334	160
Stavropol	5	2	15,966	7,591
Terek	10	6	29,334	13,917
Tiflis	92	56	5.330	2,784
Krivan	1	—	6,685	3 995
Tobolsk	153	66	24,634	12,309
Tomsk	230	105	12,400	6,780
Akmolinsk	16	7	1,593	825
Don Cossacks	2,625	1,262	35,466	17,141
Total for whole Empire	**62,107**	**24,284**	**433,643**	**215,157**

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6048 births and 5672 deaths were registered during the week ending Dec. 9th. The annual rate of mortality in these towns, which had increased from 18·3 to 28·5 per 1000 in the preceding six weeks, further rose last week to 28·6. In London the rate was 31·0 per 1000, while it averaged 27·0 in the thirty-two provincial towns. The lowest rates in these towns were 11·3 in Halifax, 14·4 in Huddersfield, 16·6 in Gateshead, 17·8 in Swansea, and 19·8 in Wolverhampton; the highest rates were 32·6 in Preston, 32·9 in Bristol, 34·6 in Burnley, 34·9 in Liverpool, and 35·6 in Bolton. The 5672 deaths included 542 which were referred to the principal zymotic diseases, against 496 and 503 in the preceding two weeks; of these, 154 resulted from whooping-cough, 124 from diphtheria, 82 from "fever" (principally enteric), 62 from measles, 61 from scarlet fever, 41 from diarrhœa, and 18 from small-pox. These diseases caused the lowest death-rates in Swansea, Wolverhampton, Halifax and Gateshead, and the highest rates in Leicester, Hull, Plymouth, West Ham, and Croydon. The greatest mortality from measles occurred in Leicester and Norwich; from scarlet fever in Norwich; from whooping-cough in West Ham, Birkenhead, Sheffield, Hull and Plymouth; and from "fever" in Salford and Croydon. The 124 deaths from diphtheria included 89 in London, 7 in West Ham, 5 in Croydon, 3 in Cardiff, and 3 in Leicester. Four fatal cases of small-pox were registered in London, 4 in Birmingham, 4 in Bradford, and one each in West Ham, Leicester, Derby, Bolton, Oldham, and Leeds. There were 128 small-pox patients under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 9th inst., against 151, 140, and 141 at the end of the preceding three weeks; 28 new cases were admitted during the week, against 21 and 33 in the preceding two weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 3129, against 3129, 3140, and 3183, on the preceding three Saturdays; 306 new cases were admitted during the week, against 363 and 373 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had increased from 271 to 737 in the preceding six weeks, further rose to 841 last week, and were nearly double the corrected average. The causes of 96, or 1·7 per cent., of the deaths in the thirty-three towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Nottingham, Bolton, Oldham, Newcastle-on-Tyne, and in seven other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Blackburn, and Huddersfield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased from 18·2 to 27·8 per 1000 in the preceding six weeks, declined again to 26·0 during the week ending Dec. 9th, and was 2·6 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 19·0 in Leith and 20·1 in Aberdeen to 28·6 in Edinburgh and 36·0 in Perth. The 732 deaths in these towns included 33 which were referred to whooping-cough, 13 to diphtheria, 8 to diarrhœa, 7 to "fever," 7 to scarlet fever, 5 to small-pox, and 3 to measles. In all, 76 deaths resulted from these principal zymotic diseases, against 56 and 74 in the preceding two weeks. These 76 deaths were equal to an annual rate of 2·7 per 1000, which corresponded with the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 25 and 32 in the preceding two weeks, further rose to 33 last week, of which 13 occurred in Glasgow, 8 in Dundee, and 6 in Edinburgh. The deaths referred to diphtheria, which had been 7 and 15 in the preceding two weeks, declined to 13 last week, and included 7 in Glasgow, and 2 in Edinburgh, Aberdeen, and Leith. The 7 fatal cases of scarlet fever showed a further slight decline from the numbers recorded in recent weeks, and included 4 in Glasgow and 2 in Perth. The deaths referred to different forms of "fever," which had been 2 and 12 in the preceding two weeks, declined again to 7 last week, of which 3 occurred in Glasgow and 3 in Dundee. Four fatal cases of small-pox were registered in Leith and 1 in Aberdeen. The deaths referred to diseases of the respiratory organs in these towns, which had been 244 and 270 in the preceding two weeks, declined to 245 last week, but were 94 above the number recorded in the corresponding week of last year. The causes of 78, or nearly 11 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 28·6 and 27·1 per 1000 in the preceding two weeks, rose again to 30·6 during the week ending Dec. 9th. During the past ten weeks of the current quarter the death-rate in the city has averaged 26·0 per 1000, against 22·4 in London and 22·5 in Edinburgh. The 205 deaths in Dublin during the week under notice showed an increase of 23 upon the number in the previous week, and included 23 which were referred to the principal zymotic diseases, against 18 and 17 in the preceding two weeks; of these 23 deaths, 9 resulted from "fever," 6 from whooping-cough, 5 from measles, 2 from diarrhœa, 1 from scarlet fever, and not one either from small-pox or diphtheria. The zymotic death-rate was equal to 3·4 per 1000, the rate during the same period being 3·2 in London and 1·6 in Edinburgh. The deaths referred to different forms of "fever," which had increased from 3 to 7 in the preceding three weeks, further rose to 9 last week. The fatal cases of whooping-cough, which had been 5 in each of the preceding two weeks, were 6 last week. The 5 deaths from measles exceeded the number recorded in any week since May last. The 205 deaths registered in Dublin last week included 43 of infants under one year of age and 45 of persons aged upwards of sixty years; the deaths of infants showed a further increase, while those of elderly persons were below those recorded in any recent week. Six inquest cases and 8 deaths from violence were registered; and 71, or more than a third, of the deaths occurred in public institutions. The causes of 22, or nearly 11 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING NOVEMBER, 1893.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during November in each of the forty-one sanitary districts of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases in the accompanying table was equal to 20·5 per 1000 of the population, estimated at 4,305,551 persons in the middle of this year. In the preceding three months the rates had increased from 17·2 to 24·5 per 1000. Among the various sanitary districts the rates last month were considerably below the average in Hammersmith, St. James Westminster, Hampstead, St. Giles, St. Martin-in-the-Fields, Strand, and Woolwich; while they showed the largest excess in Hackney, Clerkenwell, Bethnal Green, Limehouse, Poplar, St. Olave Southwark, and Greenwich. The prevalence of small-pox in London showed a marked increase during November, an average of 32 cases weekly being notified, against numbers declining from 134 to 19 in the preceding five months; of the 155 cases notified during last month, 53 belonged to Kensington, 30 to Poplar, 15 to Paddington, 11 to Chelsea, and 8 to Limehouse sanitary districts. The Metropolitan Asylum Hospitals contained 123 small-pox patients at the end of November, against 71 and 81 at the end of the preceding two months; the weekly admissions averaged 29, against 16 and 16 in the preceding two months. The prevalence of scarlet fever in London showed a marked decline from that recorded in recent months; this disease was proportionally most prevalent in Hackney, Clerkenwell, Bethnal Green, St. George-in-the-East, Limehouse, St. Olave Southwark, Rotherhithe, and Greenwich sanitary districts. The Metropolitan Asylum Hospitals contained 3059 scarlet fever patients at the end of November, against 2755, 2659, and 2633 at the end of the preceding three months; the weekly admissions averaged 385, against 293 and 321 in the preceding two months. Diphtheria showed decreasing prevalence during the month under notice; among the various sanitary districts this disease showed the highest proportional prevalence in Hackney, Clerkenwell, Bethnal Green, Poplar, St. George South-wark, Newington, Battersea, Wandsworth, Camberwell, and

MONTHLY ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON.—NOVEMBER, 1893.

(Specially compiled for THE LANCET.)

Sanitary areas.	Estimated population in the middle of 1893.	Notified Cases of Infectious Disease.											Deaths from Principal Infectious Diseases.											Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,305,551	155	4455	1770	2	639	27	41	1358	—	8447	20·5	7	193	203	435	202	—	101	3	77	1221	3·0	9762	23·6	182
West Districts.																										
Paddington	120,277	15	86	35	—	19	—	4	40	—	199	17·3	—	4	8	8	4	—	4	—	1	29	2·5	239	20·7	134
Kensington	167,038	53	117	60	—	29	5	1	45	—	310	19·3	1	4	4	9	7	—	8	—	1	34	2·1	317	19·8	132
Hammersmith	103,674	—	77	25	—	8	—	3	10	—	123	12·4	—	1	5	4	6	—	2	—	4	22	2·2	204	20·5	181
Fulham	103,076	1	94	49	—	9	1	1	17	—	172	17·4	—	—	3	11	4	—	3	—	5	26	2·6	214	21·7	185
Chelsea	98,114	11	78	41	—	11	—	—	33	—	174	18·5	1	2	1	9	3	—	1	—	3	20	2·1	170	18·1	106
St. George Hanover-square	75,825	2	62	13	—	13	—	—	20	—	110	15·1	—	—	1	3	—	—	1	—	—	5	0·7	126	17·3	163
Westminster	54,761	—	58	17	—	9	—	1	10	—	95	18·1	—	—	2	2	1	—	2	—	1	7	1·3	132	25·1	180
St. James Westminster	23,873	—	9	3	—	8	—	1	6	—	27	11·8	—	1	—	1	2	—	1	—	1	6	2·6	51	22·3	3·6
North Districts.																										
Marylebone	139,546	4	99	53	—	26	1	—	52	—	235	17·6	—		8	18	7	—	4	—	4	48	3·6	318	23·8	173
Hampstead	73,949	1	59	14	—	6	—	2	8	—	90	12·7	—	1	2	—	1	—	3	—	—	7	1·0	92	13·0	109
St. Pancras	234,025	4	274	90	—	32	—	1	75	—	476	21·2	—	36	13	18	11	—	6	—	2	86	3·8	584	26·0	189
Islington	328,608	—	307	130	—	42	1	6	89	—	575	18·2	—	8	10	23	19	—	5	—	7	72	2·3	732	23·2	195
Hackney	240,177	—	342	127	—	65	1	2	79	—	616	16·7	—	7	7	32	8	—	11	—	3	68	3·0	488	21·2	162
Central Districts.																										
St. Giles	38,511	—	24	8	—	7	—	—	15	—	54	14·6	—	2	2	4	2	—	—	—	—	10	2·7	83	22·5	191
St. Martin-in-the-Fields	13,911	—	13	5	—	1	—	—	—	—	19	14·2	—	—	—	2	1	—	—	—	—	3	2·2	34	25·5	187
Strand	23,508	—	9	9	—	3	—	—	3	—	24	10·6	—	2	3	1	—	—	—	—	—	6	2·7	92	40·8	286
Holborn	32,646	—	29	12	—	9	—	—	14	—	64	20·4	—	6	2	2	6	—	5	—	1	22	7·0	104	33·2	245
Clerkenwell	65,163	—	86	35	—	13	1	—	26	—	161	25·8	—	1	5	9	4	—	2	—	3	24	3·8	188	30·1	176
St. Luke	41,406	—	44	15	—	—	—	—	18	—	77	19·4	—	3	3	8	2	—	—	—	—	16	4·0	119	30·0	107
City of London	35,383	2	30	4	—	5	—	—	18	—	59	17·4	—	1	1	2	1	—	—	—	—	5	1·5	85	25·0	140
East Districts.																										
Shoreditch	123,425	1	128	46	1	14	—	1	46	—	237	20·0	—	16	4	16	10	—	3	—	2	51	4·3	360	30·4	222
Bethnal Green	129,625	1	217	75	—	22	1	1	57	—	374	30·1	—	4	8	22	8	—	6	—	4	52	4·2	333	26·8	197
Whitechapel	75,163	—	90	23	—	12	—	1	32	—	158	21·9	—	2	4	6	4	—	1	—	1	18	2·5	177	24·6	177
St. George-in-the-East	45,182	1	63	14	—	15	1	—	13	—	107	24·7	—	4	1	2	4	—	—	—	—	11	2·5	131	30·2	164
Limehouse	57,386	8	84	25	—	12	—	—	25	—	154	28·0	1	12	5	4	3	—	1	—	2	28	5·1	166	30·2	220
Mile End Old Town	108,006	2	114	35	—	26	—	—	48	—	225	21·7	1	7	4	12	5	—	4	—	1	34	3·3	273	26·4	174
Poplar	168,876	30	197	98	—	52	4	1	79	—	461	28·5	3	4	7	13	8	—	2	—	1	38	2·3	442	27·3	200
South Districts.																										
St. Saviour Southwark	26,823	—	28	5	—	5	—	—	14	—	52	20·2	—	1	2	1	—	—	—	—	1	5	1·9	72	28·0	221
St. George Southwark	59,952	1	56	27	—	6	—	—	19	—	109	19·0	—	3	6	6	11	—	—	—	3	29	5·0	193	33·6	218
Newington	117,430	—	137	54	—	10	—	2	48	—	251	22·3	—	5	8	15	22	—	1	—	4	55	4·9	328	29·1	218
St. Olave Southwark	12,861	—	19	13	—	—	—	—	4	—	36	29·2	—	—	—	2	1	—	—	—	—	3	2·4	38	30·8	200
Bermondsey	84,244	—	62	33	—	11	—	—	24	—	130	16·1	—	—	2	13	8	—	2	—	3	28	3·5	240	29·7	221
Rotherhithe	39,764	—	54	17	—	3	1	1	7	—	83	21·8	—	—	3	5	—	—	—	—	—	8	2·1	115	30·2	239
Lambeth	280,567	3	272	110	—	21	7	3	88	—	504	18·7	—	20	11	31	3	—	3	—	4	72	2·7	621	23·1	169
Battersea	160,633	3	169	96	1	22	1	1	64	—	357	23·2	—	23	5	28	5	—	6	—	2	69	4·5	375	24·3	215
Wandsworth	169,379	3	191	85	—	28	1	2	48	—	358	22·0	—	1	11	19	2	—	2	—	2	37	2·3	270	16·6	156
Camberwell	246,837	—	254	131	—	17	—	1	65	—	468	19·8	—	—	10	39	6	—	4	—	5	64	2·7	511	21·6	173
Greenwich	173,349	5	247	88	—	26	—	2	44	—	412	24·8	—	5	19	23	6	—	6	1	4	64	3·8	370	22·3	195
Lewisham (excluding Penge)	76,593	—	59	24	—	7	—	2	28	—	120	16·3	—	—	2	6	—	—	—	1	—	9	1·2	129	17·6	161
Woolwich	41,794	3	36	4	—	3	1	—	8	—	55	15·7	—	—	4	1	2	—	—	1	1	9	2·2	88	22·0	25·0
Plumstead	94,192	—	81	22	—	11	—	1	19	—	134	14·8	—	—	7	5	5	—	2	—	2	21	2·3	158	17·5	168
Port of London	—	1	—	—	—	1	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 95 cases of membranous croup.

† Including deaths from membranous croup.

Greenwich. There were 308 cases of diphtheria under treatment in the Metropolitan Asylum Hospitals at the end of November, against 291, 296, and 306 at the end of the preceding three months; the weekly admissions averaged 70, against 68, 65, and 64 in the preceding three months. Enteric fever showed considerably increased prevalence during last month; among the various sanitary districts this disease was proportionally most prevalent in St. James Westminster, Hackney, Holborn, St. George-in-the-East, and Poplar. The Metropolitan Asylum Hospitals contained 116 enteric fever patients at the end of November, against 95, 104, and 112 at the end of the preceding three months; the weekly admissions averaged 19, against 16, 17, and 17 in the preceding three months. Erysipelas showed the highest proportional prevalence in St. Luke, City of London, Bethnal Green, Mile End Old Town, and Poplar sanitary districts. Six cases of puerperal fever were notified during November in Islington, 4 in Paddington, 3 in Hammersmith, and 3 in Lambeth sanitary districts.

The mortality statistics in the accompanying table relate to the deaths of persons actually belonging to the various metropolitan sanitary districts, the deaths occurring in the institutions of London having been distributed among the various sanitary districts in which the patients had previously resided. The distribution of these deaths, especially of those resulting from zymotic diseases, affords the most trustworthy data upon which to calculate reliable rates of mortality. During the five weeks ending Saturday, Dec. 2nd, the deaths of 9762 persons belonging to London were registered, equal to an annual rate of 23·6 per 1000, against 21·8, 20·2, and 17·8 in the preceding three months. The lowest death-rates during November in the various sanitary districts were 13·0 in Hampstead, 16·6 in Wandsworth, 17·3 in St. George Hanover-square, 17·5 in Plumstead, 17·6 in Lewisham (excluding Penge), and 18·1 in Chelsea; the highest rates were 30·2 in St. George-in-the-East, in Limehouse, and in Rotherhithe, 30·4 in Shoreditch, 30·8 in St Olave Southwark, 33·2 in Holborn, 33·6 in St. George Southwark, and 40·8 in Strand. During the five weeks of November 1221 deaths were referred to the principal zymotic diseases in London; of these, 435 resulted from diphtheria, 203 from scarlet fever, 202 from whooping-cough, 193 from measles, 104 from different forms of "fever" (including 101 from enteric fever and 3 from ill-defined forms of fever), 77 from diarrhœa, and 7 from small-pox. These 1221 deaths were equal to an annual rate of 3·0 per 1000, against 3·6 and 2·7 in the preceding two months. Among the various sanitary districts the lowest zymotic death-rates were recorded in St. George Hanover-square, Westminster, Hampstead, City of London, St. Saviour Southwark, and Lewisham; and the highest rates in Holborn, Shoreditch, Limehouse, St. George Southwark, Newington, and Battersea. Seven fatal cases of small-pox were registered in London during the month under notice, being 11 below the corrected average number in the corresponding periods of the preceding ten years; of these 7 deaths, 3 belonged to Poplar, and 1 each to Kensington, Chelsea, Limehouse, and Mile End Old Town sanitary districts. The 193 deaths referred to measles were 63 below the average number; among the various sanitary districts this disease showed the highest proportional fatality in St. Pancras, Holborn, Shoreditch, Limehouse, and Battersea. The 203 fatal cases of scarlet fever exceeded by 48 the corrected average number; this disease was proportionally most fatal in Strand, Clerkenwell, Limehouse, St. George Southwark, and Greenwich sanitary districts. The 435 deaths referred to diphtheria were nearly three times the corrected average and exceeded the number in any month on record; among the various sanitary districts this disease showed the highest proportional fatality in Hackney, St. Luke, Bethnal Green, Newington, Bermondsey, Battersea, Camberwell, and Greenwich. The 202 fatal cases of whooping-cough were 44 above the corrected average; this disease was proportionally most fatal in Holborn, Shoreditch, St. George-in-the-East, St. George Southwark, and Newington sanitary districts. The 104 deaths referred to different forms of "fever" almost corresponded with the corrected average; among the various sanitary districts the highest "fever" death-rates were recorded in Hackney, Holborn, Bethnal Green, and Greenwich. The 78 fatal cases of diarrhœa were 18 below the average. In conclusion, it may be stated that the mortality in London during November from these principal zymotic diseases exceeded the average by nearly 32 per cent.

Infant mortality in London during the month under notice, measured by the proportion of deaths under one year of age to births registered, was equal to 182 per 1000, and considerably exceeded the average; the lowest rates of infant mortality were recorded in Paddington, Kensington, Chelsea, Hampstead, St. Luke, and City of London; the highest rates in St. James Westminster, Strand, Holborn, Shoreditch, St. Saviour Southwark, Bermondsey, and Rotherhithe sanitary districts.

THE SERVICES.

MOVEMENTS IN THE MEDICAL STAFF.

THE following officers embarked on the 9th inst. for a tour of service in India: Surgeon-Major Cree, Surgeon-Captains Skinner and Weir, and Surgeon-Lieutenant Mitchell. Surgeon-Major Maclean also embarked in the *Serapis* on return from sick leave. Surgeon-Lieutenant-Colonel Barry has assumed Medical Charge of the Curragh. Surgeon-Captain Morgan has been posted to the Thames District. Surgeon-Captain Mangan has been transferred from Aldershot to London for temporary duty; Surgeon-Lieutenant Buswell to Newbridge; and Surgeon-Lieutenant Samman to Dublin. Surgeon-Captain Luther has embarked for the Mauritius on return from sick leave, and Surgeon-Major Dempsey has resumed his duties at Aldershot. Surgeon-Lieutenant-Colonel Collier, retired pay, has resigned his appointment at Berwick-on-Tweed.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following appointments are announced:—12th Regiment (2nd Burmah Battalion), Madras Infantry: Surgeon-Captain Vickers, M.B., M.C., I.M.S., to the Medical Charge of the Regiment. 15th Regiment, Madras Infantry: Surgeon-Major J. J. Moran, M.D., I.M.S., to the Medical Charge of the Regiment. 17th Regiment, Madras Infantry: Surgeon-Captain G. G. Giffard, I.M.S., to the Officiating Medical Charge of the Regiment. 20th Regiment, Madras Infantry: Surgeon-Lieutenant-Colonel T. C. H. Spencer, I.M.S., to the Officiating Medical Charge of the Regiment. 27th Regiment, Madras Infantry: Surgeon-Captain I. P. Doyle, D.S.O., I.M.S., to the Medical Charge of the Regiment. 31st Regiment (6th Burmah Battalion), Madras Light Infantry: Surgeon-Major A. G. E. Newland, I.M.S., to the Medical Charge of the Regiment. Surgeon-Major J. Moorhead, M.D., I.M.S., (Bengal) Civil Surgeon, Bhagalpur, is appointed Joint Medical Officer of Simla in succession to Surgeon-Major J. Lewtas, M.D., whose services are placed temporarily at the disposal of the Government of Bengal. Surgeon-Captain J. T. Calvert, Civil Surgeon of Chittagong, is appointed to act as Civil Surgeon of Mymensingh, or until further orders. Mr. Peary Mohan Gupta, Officiating Civil Medical Officer of Mymensingh, is appointed to act as Civil Medical Officer of Noakhali. Mr. R. S. Ashe, Civil Medial Officer of Jalpaiguri, is appointed to be Civil Medical Officer of Serampore in the District of Hooghly. Mr. J. L. Hendley, Civil Medical Officer of Serampore, is appointed to be Civil Medical Officer of Jalpaiguri. Mr. C. Banks is appointed to be Civil Medical Officer of Noakhali, but will continue to act as Civil Medical Officer of Puri until further orders. Mr. P. A. Rigby, Civil Medical Officer of Rangpur, is appointed to be Civil Medical Officer of Faridpur. Surgeon-Major J. C. Marsden is appointed to be Civil Surgeon, Coconada, in succession to Surgeon-Major J. Maitland, M.D. Surgeon-Captain G. C. Hall is appointed to be additional Medical Officer, General Hospital, Madras, and to act as Secretary to the Surgeon-General with the Government of Madras during the employment of Surgeon-Major C. M. Thompson, M.B., on other duty. Surgeon-Major A. J. O'Harais appointed to act as District Surgeon, South Canara, and Superintendent of Gaol, Bangolore, during the employment of Surgeon-Major W. A. Lee on other duty. Surgeon-Captain D. Simpson, M.B., is appointed to act as additional Medical Officer, General Hospital, Madras, during the employment of Surgeon-Captain G. Hall on other duty. 1st Battalion, 1st Gurkha Rifles: Surgeon-Major A. Duncan, from the Medical Charge of the Corps of Guides to the Officiating Medical Charge of the Battalion, vice Surgeon-Lieutenant-Colonel A. F. Seaman.

NAVAL MEDICAL SERVICES.

The following appointments are announced: Fleet-Surgeon Matthew F. Ryan, to the *Vivid* (additional). Surgeons: W. G. Oxford, to the *Penelope*, for Ascension Island; E. T.

† Including deaths from membranous croup.

* Including 95 cases of membranous croup.

Meagher, to the *Defiance*; E. F. Mortimer, to the *Cambridge*; Henry B. Hall, to the *Caledonia*; Arthur H. Howell, to the *Plassy*; Horace B. Marriott, to the *Victory* (additional); and Hugh St. D. Griffiths, to the *Virid* Inspector-General Duncan Hilston, M.D., to Haslar Hospital.

VOLUNTEER CORPS.

4th Volunteer Battalion, the King's (Liverpool Regiment): Surgeon-Captain G. G. Hodgson resigns his commission.—1st Volunteer Battalion, the Prince of Wales's Own (West Yorkshire Regiment): Surgeon-Major W. H. Jalland resigns his commission; he is also permitted to retain his rank and to continue to wear the uniform of the Battalion on his retirement.—1st Roxburgh and Selkirk (the Border): Surgeon-Major G. H. Turnbull, M.D., to be Surgeon-Lieutenant-Colonel; William Doig, M.D., to be Surgeon-Lieutenant.—1st Volunteer Battalion, the Gordon Highlanders: Surgeon-Major P. B. Smith, M.D., to be Surgeon-Lieutenant-Colonel.—7th Middlesex (London Scottish): The undermentioned Surgeon-Captains resign their commissions: L. Ogilvie, M.B., and G. Ogilvie, M.B.

THE VOLUNTEER OFFICERS' DECORATION.

This decoration has been conferred upon the undermentioned medical officers: *Western District: Artillery:* 2nd Glamorganshire: Surgeon-Lieutenant-Colonel Charles Tanfield Vachell, M.D.—*Rifle:* 4th Volunteer Battalion, the Devonshire Regiment: Surgeon John Gould, retired.—*South-Eastern District: Artillery:* 2nd Cinque Ports (Eastern Division, Royal Artillery): Surgeon and Honorary Surgeon-Major (ranking as Major) A. R. Ticehurst, retired.—*Scottish District: Rifle:* 1st (Inverness-shire) Highland Volunteer Battalion, the Queen's Own Cameron Highlanders: Surgeon and Surgeon-Major (ranking as Lieutenant-Colonel) Kenneth Corbett, retired.

THE MATABELELAND EXPEDITION.

According to late intelligence there was every reason to hope and believe that, as far as any more fighting is concerned, this expedition may be said to be over. The natives were giving up their arms and returning to their usual occupations, and the operations now resolve themselves, it was reported, into adopting such precautionary measures as will ensure the maintenance of peace. The latest news from the Cape, however, would indicate that this favourable estimate of the situation is premature. It seems uncertain whether Lobengula has been captured as previously reported. A small advanced force under Captain Wilson, sent in pursuit of the King, is said to have been compelled to retire. The Matabele wounded are stated to be progressing favourably. The Chartered Company have utilised some of their waggons for the transport of wounded to Buluwayo for treatment. All the men of the force are under canvas or in huts, and, spite of the rain, there is no sickness.

THE PASTEUR INSTITUTE FOR INDIA.

The scheme for the establishment of this institute seems to be progressing very favourably. Additions to the funds in the way of donations, monetary grants, and subscriptions from municipalities, natives, and Europeans, are coming in, and the Government of India have promised the services of a qualified medical officer to superintend the institution.

AT a recent meeting of the Sheffield Board of Guardians the medical officers of the union presented the following petition: "We, the undersigned medical officers of the Sheffield union, beg to bring before the consideration of the guardians the totally inadequate remuneration for their great and constantly increasing amount of work, and trust that the guardians will be able to see their way to revise the list of salaries and make them more in proportion to the amount of work performed." The letter was referred to a committee.

LEAD INDUSTRIES.—The departmental committee appointed by Mr. Asquith to inquire into the white-lead and allied industries have issued their report. The committee had been requested by the Home Secretary to make their inquiries in three different directions: (1) into the conditions under which the various leads of commerce are prepared; (2) into the rules with regard to the manufacture of white-lead; and (3) into the possibility of devising ampler precautions for the protection of the lives of the lead-workers. Their report is a most interesting, comprehensive, and medically important document, and will receive full notice in our columns shortly.

Correspondence.

"Audi alteram partem."

THE ROYAL COLLEGE OF SURGEONS, IRELAND, AND APOTHECARIES' HALL, DUBLIN, CONJOINT EXAMINATION.

To the Editors of THE LANCET.

SIRS,—As your reporter does not appear to have caught my reply to Sir William Turner's observation made in the course of the debate on the above subject at the meeting of the General Medical Council on Saturday, the 2nd inst., "that my motion was unnecessary because the whole question was before the Education Committee," permit me to say now that I pointed out to him that he was under a misapprehension; the report of the inspector and visitor on the final examination of those bodies alone was before the Committee, while my motion referred altogether to their previous examinations, and, moreover, that no inspector could detect the irregularities I referred to, for he could only report on the subjects examined; of the system by which certain subjects were evaded he could have no knowledge. May I also point out that, while I willingly agreed to Sir Philip Smyly's suggestion to postpone the subject till the May meeting, I cannot admit that the course adopted was in any way irregular or improper; my original notice was to refer to the consideration of the two Committees both the defective curriculum and the alleged insufficient examination for their report. The report of the Education Committee subsequently presented to the Council rendered the first part of my notice unnecessary, but the second part I felt bound to proceed with, and I was equally bound to give my reason for so doing. Had I not withdrawn my motion at Sir Philip Smyly's request, the Committee would have, of course, communicated with the Royal College of Surgeons and Apothecaries' Hall before reporting and heard their explanations, so that the result will in the end be exactly the same.

I am, Sirs, yours obediently,

Dublin, Dec. 10th, 1893. LOMBE ATTHILL, M.D.

"PLASTIC BRONCHITIS."

To the Editors of THE LANCET.

SIRS,—Under the above heading your correspondent "B.," writing from the West Indies, asks whether any of your readers can suggest some remedy which would be likely to benefit a patient who for two years has suffered from the affection named, in spite of various treatment. It is possible, as I hope, that the following remarks may be useful, by way of suggestion. Some years ago I exhibited at the Pathological Society of London an interesting specimen of plastic fibrinous casts of larger and smaller bronchi which we have in our pathological museum at St. George's Hospital.[1] The patient, who had been under the care of one of our hospital physicians, the late Dr. Seymour, had been ill for a year, and "had brought up, by coughing, every third or fourth day, a large quantity of plastic lymph, in pipes exactly resembling macaroni, and in their entire shape having the appearance of a mould of the bronchial ramifications." Dr. Seymour says: "The patient had every rational and irrational medicine." He entirely recovered, the chief benefit being derived "from the inhalation of the vapour of the 'pix liquida' (three drachms to the pint) for ten minutes three times a day." After describing, at the Pathological Society, the results of my microscopical examination of the fibrinous casts, I drew the attention of the members to the observations on the use of the vapour of tar to be found in Pereira's Materia Medica, and remarked that the beneficial use of the vapour was probably due to the stimulating properties of the volatile pungent material, the pyroligneous and acetic acid &c., contained. These fibrinous casts or moulds of the bronchial system (formerly designated, as by Warren, and others who wrote of them, "bronchial polypi") are comparatively rare, but several cases may be found described in the Transactions of the Pathological Society by various pathologists—Peacock,

[1] See Catalogue, Series 7, No. 96, and Pathological Society's Transactions, vol. xi., p. 22.

Bristowe, Hyde Salter, and others; and an interesting case, which we had in one of our hospital wards, is given by my former colleague, the late Dr. Fuller,[2] in connexion with which there is a careful and elaborate table, by Dr. Peacock, of thirty-one collated cases collected from medical literature, as well French and German as English, in addition to sundry incidental cases, up to the year 1853. In none of the descriptions of these cases do I find any allusion to the use of tar vapour as a remedy. Sir Thomas Watson, in the chapter of his lectures on the "Principles and Practice of Physic," dealing with "chronic bronchitis," states that he had only met with two cases (which he describes very graphically) of this so-called plastic bronchitis, the patients, curiously enough, being two brothers. In these cases bloodletting and mercurial salivation, as also the use of acetate of lead and other styptics, were resorted to, but there is no mention of the use of tar water.

I am, Sirs, yours truly,

Cavendish-square, W., Dec. 2nd, 1893. JOHN W. OGLE.

ODONTOMES.

To the Editors of THE LANCET.

SIRS,—Dr. Alfred Swann was good enough to furnish in THE LANCET of Dec. 9th details of an interesting odontome which he removed from the mandible. There is, however, a curious error in the account, but for that Dr. Swann is not to blame; it is to the effect that only about nine cases are known and these occurred in the lower jaw. I have collected twenty-four cases of similar tumours in man; of these, eight were from the upper jaw, six of which are figured in my recent work on tumours. Odontomes attain far larger proportions, and, indeed, sometimes become more formidable, in the maxilla than in the mandible. It is difficult to determine how the error arose that odontomes are confined to the mandible; for in the classical specimen detected by Hare of Limerick the odontome occupied the maxilla (upper jaw) and is certainly one of the earliest (1863) cases recorded in Great Britain.—I am, Sirs, yours truly,

J. BLAND SUTTON, F.R.C.S. Eng.

Queen Anne-street, W., Dec. 12th, 1893.

"PUERPERAL SEPTICÆMIA."

To the Editors of THE LANCET.

SIRS,—Being strongly convinced of the great importance of good sanitation as a means of reducing the mortality of puerperal fever I shall be glad if you will permit me to reply to the letter of Drs. Herman and Cullingworth in THE LANCET of Dec. 2nd. The general experience of most hospital and army surgeons and obstetricians, before the introduction of antiseptics, and since then where for various reasons antiseptics have not been employed, has surely shown how indispensable hygienic surroundings have been for the reduction of mortality from the various septic diseases. The late Netten Radcliffe, in one of his reports, said: "Few facts are perhaps more clearly established in medicine than the mischievous influence of an atmosphere pervaded with sewer air in surgical wards." The composition of sewage and the movements of sewer air being so variable under such very different circumstances one cannot expect that there should be but *one definite* disease that could be called sewer-air poisoning. But that sewer air is capable of producing disease—e.g., typhoid fever—is shown by the investigations of Sir G. Buchanan, Dr. Thorne Thorne, and others. Professor Notter also gives the instance of Eastney Barracks. That sewer air can also contaminate water, milk, and other food, and thus produce typhoid fever, is shown by the reports of these and other observers—for example, T. Wardle.[3] Sewage is well known to contain an immense number of bacteria. Davaine, Pasteur, Koch, Klein and others have shown how many different micro-organisms can produce septicæmia in animals and men. Also typhoid fever and some other cultivations by *inoculation* (that is, not in the media in which they usually produce the specific disease, typhoid fever &c.) have been shown to give rise to *septicæmia* in animals, and therefore possibly in men also (Klein). This may perhaps account or the large amount of clinical evidence that surgical evers, scarlet fever &c. may produce puerperal fever. Specific septicæmic germs may, however, often accompany the specific germs of the diseases just mentioned. For these several reasons it is most probable that sewer air often contains some of the germs that will produce septicæmia and other surgical diseases. There are also many other cases recorded in which there has been the strongest evidence that surgical and puerperal fevers have resulted from sewer-air pollution (Professor Corfield and others). When one considers the enormous number of puerperal women who, on account of damaged tissues and lochia, are such good media for many germs, I think it is not surprising that one should hear sometimes of sewer air producing septicæmia in them. My experience (I have carefully attended more than 1000 midwifery cases and watched many more abroad), and I think that of most obstetricians, is that one may have various forms of puerperal fever, varying from septic intoxication (sapræmia) to pyæmia—omitting, of course, other well known causes of febrile temperature. The form depends upon the amount of the poison and the kinds of germs attacking the patient; and septicæmia and pyæmia can in most cases be prevented by promptly attending to the patient on the earliest signs of sapræmia. This, I think, too, is in accordance with the latest theories of infection.[4] I hope that I have said enough to prove that the maxim of obstetric teachers ought to be—cleanliness *plus* sanitation.—I am, Sirs, yours truly,

W. A. BOND,
M.D., B.C., D.P.H.Camb., M.R.C.P.Lond., Deputy Medical Officer of Health, City of London.

Duke-street, St. James's, S.W., Dec. 5th, 1893.

To the Editors of THE LANCET.

SIRS,—Two statements made by Drs. Herman and Cullingworth in THE LANCET of Dec. 2nd are not likely to meet with universal acceptance amongst surgeons. They say that "the phenomena of septicæmia are uniform and well marked, whether it occurs after a delivery or after a surgical operation," and that "one never hears of septicæmia being produced by sewer-gas poisoning except in the case of puerperal women." May I point out that a committee of the Pathological Society came to the conclusion that "the term septicæmia, as at present used, cannot be said to have any definite meaning."[5] Again, Mr. Victor Horsley writes that "the form in which the disease appears is variable,"[6] and he carefully makes it clear that he does not include sapræmia or pyæmia under the term "septicæmia." Clinically, after delivery there may be death from septicæmia in two or three days, or after weeks of exhausting fever; there may be low forms of temporary or fatal inflammation of the lungs; the patient may be ill for weeks or months, or may acquire permanent disease—suppurating salpingitis, for example—as a result of her confinement. If these are, as they are generally considered, so many manifestations of septicæmia, it can scarcely be scientifically accurate that the phenomena of this disease are "uniform and well marked."

I have recently endeavoured to show that any poison which causes a wide-spread or universal irritation of the tissues with suppression of urine, if acting during a traumatic fever, must produce symptoms closely resembling, perhaps clinically inseparable from, those of a true surgical septicæmia,[7] and I am not aware that it can be said that any differentiated germ or virus is recognised as the cause of this disease. For the development of septicæmia it is not necessary to have a pre-existing case. Decomposing animal matter produces the poison, and the occupants of a house in which the drains are defective are exposed to the influence of the products of decomposition of animal matter, for much more than sewer gases may come from a leaky drain. "These gases are probably the least important ingredients of sewer air. That organic matters are present is evident from the peculiar fetid smell, and in some cases they are present in large amount. Eight thousand cubic feet of the air of a house into which sewer gas had penetrated destroyed more than twenty times as much potassium permanganate as the same quantity of pure air" (Dr. Angus Smith).[8] In a house with defective drains, therefore, the recognised cause of septicæmia exists. Hence, unless it can be proved that the particular kind of decomposing matters found in sewers will not produce the poison of septicæmia, it is most undesirable (one

[2] Transactions of the Pathological Society, vol. v., p. 41.
[3] On Sewage, 1893.
[4] Klein, Hygiene, vol. ii., &c.
[5] Transactions of the Pathological Society, vol. xxx., p. 10.
[6] Heath's Dictionary of Surgery, art. Septicæmia.
[7] The Physiology of Death from Traumatic Fever, pp. 113, et seq.
[8] Parkes' Hygiene. Seventh Edition, p. 147.

might almost say it is a "dangerous" doctrine) that the importance of this source of origin of septicæmia should be depreciated. Moreover, it can serve no good purpose to attempt in this way to exalt the importance of antiseptics, because, if it were a proved fact that defective drains are never a cause of septicæmia, we could not from such a fact draw a logical conclusion that antiseptics are ever useful. Many of us would have one reason the less for using them. If, on the other hand, we recognise that the emanations from sewers are possible sources of septic poisons, the question at once arises whether and to what extent the medical attendant can, by the use of antiseptics, neutralise the effects of the presence of such emanations in the house of his patient. This is quite another question; but may I add that, as I interpret the teachings of Lister, we must consider septic diseases—sapræmia, septicæmia, pyæmia, and perhaps other nameless undifferentiated forms—as of the most insidious nature; we must endeavour to remove all possible sources of putrefactive changes from the surgical and lying-in sick room, and we must use antiseptics to prevent danger from those sources which we cannot discover.

I am, Sirs, your obedient servant,

Dec. 5th, 1893. JOHN D. MALCOLM.

To the Editors of THE LANCET.

SIRS,—Dr. Braxton Hicks' paper brought to the front several points of great interest, most of which, including the importance of strict antisepsis, were dealt with to the satisfaction of all concerned; but the relation of sewer air to puerperal diseases must, I think, still be considered as an open question. May I, like the rest, be permitted to add a few words to the observations I ventured to make at the discussion. When we speak of puerperal septicæmia what do we exactly mean? Is it a strictly definable term? Can the malady called by that name be, at present at any rate, classed among the diseases called specific? If it is true that puerperal septicæmia may arise on the one hand autogenetically from decomposing material in the genital canal, or on the other from contamination by the contact of those who come unpurified from making post-mortems or handling ulcerating cancers or phlegmonous abscesses and such-like things, it is difficult to imagine that it can be due to any one single organism, unless, at any rate, it is one of wide distribution. If it is admitted that the sources of the disease are so various, are we justified in the present state of our knowledge in excluding a vitiated atmosphere, fresh from a locality teeming with microbes, from all share even in direct causation. I suppose it is usually held that a disease of a specific character must be due to a specific cause—a previous case—and usually be associated with a special microbe, which microbe seems to be looked upon as being sent into the world for the sole and express purpose of killing people in its own particular way. From such a standpoint, for the reasons just given, I hold that puerperal septicæmia cannot take rank beside such a disease as small-pox, on the ground of its specificness. If we seek the origin of diseases held to be specific—such as small-pox or scarlet fever—must we look with the eye of faith back through the long centuries to the indefinitely remote period when all things had their beginning, or may we, our imaginations taking another direction, deem it possible that when old things are brought into new relations, fresh results may be produced, whether they be called in this connexion toxines, albumoses, or what you will? Putting it in another way, suppose it is proved that a particular disease is always produced by a particular organism, does it necessarily follow that that organism was created for the whole and sole purpose of producing that malady? Years ago Koch experimented with indifferent organic matter in a state of decomposition—by "indifferent" I mean chosen merely for reasons of convenience. This material may, I suppose, be looked upon as a cultivation of atmospheric germs, but with it he succeeded in producing several diseases, notably mouse septicæmia, which were new and artificial, but which, nevertheless, possessed the characters of true specific diseases breeding true and possessing the power of being inoculated. Are we to suppose that this microbe of mouse septicæmia came into the world for the sole purpose of producing that disease? If so it had to be shown how to perform its own proper functions. Is it not possible that microbes, even pathogenic like other poisonous plants, may exist and have a life history of their own quite apart from the diseases which they are capable of producing? and if they can luxuriate on gelatine plates or in cultivation liquids, why not in sewers? The statement of Drs. Herman and Cullingworth, "that one never hears of septicæmia from sewer gas except in puerperal women," if not too broad goes, to my mind, against their argument. The surgeons alive to the importance of atmospheric germs, whether from sewers or elsewhere, shut them all out by liberal antiseptic dressings, which obviously cannot be done in the case of a puerperal woman; hence possibly the result.

I am, Sirs, yours truly,

FRANCIS T. TAYLER.

Lewisham High-road, S.E., Dec. 4th 1893.

"SNEEZING WHILE UNDER CHLOROFORM."

To the Editors of THE LANCET.

SIRS,—Dr. Chalke, in the article on which you comment in THE LANCET of Dec. 2nd, does not say whether the patient was in the habit of sneezing under slight provocation. During forty years' pratice in London I have met with, I think, six curious cases of what I call "sneezers," such patients sometimes sneezing for half an hour continuously every morning without any apparent provocation. I have never been able to relieve these cases in the least. Then we are not informed how the chloroform was administered or how much chloroform had been used. The question of slow or fast administration is material here. In fast administration the central organs may have their functions entirely suspended before the superficial nerves and nerve-endings have been fully influenced by the complete soakage of chloroform into these less vascular parts. In this fast administration I believe the dangers of chloroform to lie. I have used chloroform a great deal, and I have never on any occasion had the least occasion for anxiety as to its effects. My rules have been to administer it gradually and never so as to exclude air; in long operations never, unless from some overruling necessity, to allow the patient to become profoundly narcotised; and always to watch the breathing. Under the pressure of professional opinion I have from time to time used ether and also bichloride of methylene. I have always returned to chloroform, and I believe it to be the best and the safest anæsthetic.

Snow's most valuable classic on Chloroform is now out of print, but I always go back to that work. At page 41 he says: "The coöperation of the brain with the nerves is, of course, necessary to sensation; and it is possible by a large dose of chloroform to produce complete anæsthesia very suddenly before there is time for the nerves to be acted upon locally to any extent; and if the chloroform is not continued the anæsthesia may subside as quickly as it was induced. The larger ganglia of sensation, the optic thalami, seem to require a greater quantity of chloroform to suspend their function than is necessary to suspend that of the cerebral hemispheres; but, *by occupying three or four minutes in giving chloroform*, one is enabled to add its local action on the nerves to its influence on the brain, and thus to induce anæsthesia with less narcotism of the nervous centres than would otherwise be required." At page 42 he says: "There are some further effects of chloroform with which one becomes acquainted in experiments on the lower animals. If the inhalation is continued after the symptoms just described are produced, the breathing is rendered difficult, feeble, or irregular, and is sometimes performed only by the diaphragm, while the intercostal muscles are paralysed. If the dose of chloroform is gradually increased after these effects are produced, the breathing entirely ceases, but the heart continues to pulsate very distinctly, till its action becomes arrested by the absence of respiration, as in asphyxia. Although the respiration may be suspended by an amount of chloroform that has very little direct effect on the motion of the heart, it is quite possible to stop the heart's action by the immediate effect of this agent. When frogs are exposed to the action of the vapour they go on absorbing it by the skin after the respiratory movements have ceased; and in this way the pulsations of the heart are arrested when a certain amount of chloroform has been absorbed into the blood. And when animals of warm blood are made to breathe air containing as much as 8 to 10 per cent. of the vapour of chloroform the blood which is passing through the lungs becomes so charged with it as to stop the action of the heart when it reaches that again through the coronary arteries. *It is in this way that accidents from chloroform have happened.* The power of this agent to arrest the pulsations of the heart can also be shown by blowing a stream of the vapour on its

surface when the chest is opened immediately after the breathing has ceased and while it is still beating. The ultimate and greatest effect that chloroform is capable of producing on the animal body is to destroy the irritability of the muscles and produce the post-mortem rigidity. Either the whole body or a single limb can be rendered instantly rigid by injecting the arteries with a little chloroform shaken up with water. The rigidity remains for weeks in the dead body and would probably be permanent if the chloroform were prevented from evaporating. While it lasts putrefaction is of course prevented. The pulse affords no criterion of the amount of narcotism."

I submit that the facts thus admirably set forth show that we should give chloroform so gradually that it may uniformly saturate the blood; that the eye or ear on the respiration of the patient is the proper check to its action; and that we should use some apparatus which leaves the respiration perfectly free, while a measured fraction of a grain of chloroform can be pushed into each inspiration until the necessary narcotism is induced. The Junker inhaler, as recently improved by Krohne, meets these indications, and, with a little practice, gives perfect control.

I am, Sirs, yours faithfully,

Dover-street, Piccadilly, Dec. 4th, 1893. JAMES EDMUNDS.

To the Editors of THE LANCET.

SIRS,—Your interesting annotation on the communication of Dr. E. Lerede Chalke upon this subject recalls an incident I met with as follows:—While acting for the resident medical officer at the Norfolk and Norwich Hospital some years ago a little girl about seven years of age was brought into the surgery with a greengage plum-stone impacted in the right nostril. It had been thrust up by the little patient herself three days previously, and all attempts to dislodge it had been futile. The mucous membrane was greatly swollen and inflamed, and the attempt to gain an idea as to the situation of the obstruction by the gentlest use of the probe was so painful that it had to be given up. Chloroform was administered, and to my horror, after a few whiffs only had been inhaled, respiration ceased. Artificial respiration was at once resorted to and persevered in for some time, but without success, when it occurred to me to make the attempt to extract the stone. A fenestrated scoop was on the table, and this I inserted and carried at once over the upper surface of the stone as far back as was necessary, and then the stone was gently prised out of its bed and slipped out. To my great relief a violent fit of sneezing was at once induced by this, dislodging a quantity of sanguinolent mucus and pus. The breathing, which was at first shallow, but soon deepened into regular and healthy rhythm, returned without any further mishap. Dr. Chalke's remarks upon his case, and your annotation upon it, give emphasis to a train of reflections that have often recurred to me since my own case. Firstly, is it not a fact that, when in any operation for the relief of any portion of the respiratory apparatus, and for the reasons which Dr. Chalke has set forth, the eyeball and orbit, on account of their free nerve supply drawn from the upper branches of the fifth nerve, are included, the dangers of chloroform narcosis are met with in a greatly enhanced proportion compared with operations on other parts of the body? Secondly, why not in a case of cessation of the respiration in chloroform narcosis have recourse to some means of irritating the deeper and more acutely sensitive filaments of the sensory fifth nerve which are distributed to the walls of the nasal cavities in order to set up reflex sneezing, the effects of which were so marked in the case narrated by Dr. Chalke and so effective in my own case? It is in the hope that this suggestion may prove of some practical use that I desire, through the medium of your valued journal, to place it before the minds of the profession at large.

I am, Sirs, yours faithfully,

Dec. 6th, 1893. CHARLES GAYFORD, M.D. Durh.

THE STUDY OF SCIENCE BEFORE REGISTRATION.

To the Editors of THE LANCET.

SIRS,—I should like to be permitted to make a few observations about the study of the more scientific branches of the curriculum before registration. The subjects I allude to are chemistry, biology and physics. These subjects should, I contend, be studied *after* registration and at a proper *medical* school and not at the private school from which the student comes. When it was decided that these subjects should be included in the medical curriculum, it was because of their direct bearing upon medicine and surgery. The students study these subjects not in order to qualify them for an arts degree, but in order to enable them to appreciate better materia medica, anatomy, and physiology. That they may gain the full advantage from a course of physics (to take one of these subjects) it is better that they should be taught by a medical man who has qualified himself in this subject, or at least by a teacher who understands and appreciates the requirements of medical students by having undergone a medical training. Who but such a teacher can so constantly keep before them the bearing of the laws of the science upon the subjects they will afterwards have to study, or can so frame his course as to bring into illustration constant physiological and pathological facts? One need only instance the subject of hydrokinetics. Who but a medical man would be likely to draw attention to the laws governing the circulation of the blood, the pulse, the pressure upon the aortic valve, and upon the walls of an aneurysm? Such examples could be multiplied indefinitely. Again, biology should be studied at the same time as elementary human anatomy; my experience in teaching men this subject has shown me how difficult—nay, how almost impossible—it is to give them any real comprehension of it unless they have had some grounding in the structure of the human body.

To take another ground, why should such important subjects be wholly relegated to school life at a time when the student is too young to properly appreciate them, and when mixed up, as they must be, with all the subjects for the preliminary examination, they are likely to consist more of coaching for the particular examination than of a properly detailed practical and experimental course? Let these subjects by all means, if room can be found for them, be taught in an elementary fashion at the preparatory schools; but let this be supplemented after the anxiety of the preliminary examination is over by proper courses at the medical school at which the student enters. This, let me add, is the rule in France, where also in the case of physics students have to attend a practical as well as a theoretical course, both of which are, I may say from my own experience, most thorough and most useful to the student in his after career.

I am, Sirs, yours truly,

Edinburgh, Dec. 12th, 1893. DAWSON TURNER.

"THE SO-CALLED 'PARASITIC PROTOZOA' OF MAMMARY CARCINOMA."

To the Editors of THE LANCET.

SIRS,—Having somewhat inadvertently mentioned the name of Dr. Armand Ruffer in reply to a rather rough onslaught by Dr. Cattle, I find myself with much surprise accused of betraying the secrets of private conversation. It is obviously futile to discuss pathological incidents, especially of the microbic order, on the faith of any secondhand reproduction of high-power microscopic phenomena. Seeing, therefore, that the particular slide from which my illustrations were taken had—as I now feel at liberty to state—been borrowed from me by Dr. Ruffer, professedly with the object of drawing some of the numerous and well-marked "protozoa" it was admitted by him to contain, I was tempted to quote his high authority solely for purposes of identification, and no more. I was not aware that a simple verification in the matter of a topic long *coram publico* should have been held so confidential as it now appears to be, and in the interests of scientific accuracy I fail yet to see any great impropriety in my conduct. If in error I can only express my sincere regret. I should like to add that the slide in question is perfectly at the service of Dr. Cattle or of any other worker in the same field for examination and report. There is, however, nothing remarkable about it further than as serving to illustrate a point now apparently conceded—viz., that no special mode of preparation is needed to demonstrate these "cancer protozoa." That "I have been unable to recognise the parasites on my own slide" is hardly wonderful, as in none of those prepared with the advantage of complex staining processes by Dr. Ruffer himself have I ever yet been able to discern anything which did not present very conspicuous morphological contrasts to an indubitable coccidium, or which would not have been referred by the unbiased observer to simple nuclear modification. The question at issue is, however, wholly impossible

of decision by considerations purely morphological. Were the coccidial resemblance of these nuclear phenomena far more intimate than it actually is the extreme *a priori* improbabilities—which it was the object of my paper to point out—would have to be surmounted before such could be regarded with the faintest show of probability as *bonâ-fide* parasitic organisms.

I am, Sirs, your obedient servant,

Gloucester-place, W., Dec. 11th, 1893. HERBERT SNOW.

"RÖTHELN AND SCARLET FEVER."

To the Editors of THE LANCET.

SIRS,—Dr. Atkinson says that the weak points in my argument are (1) my assumed correctness of my diagnosis, and (2) my assumption that he put forward one symptom by itself. I cannot imagine how anyone could twist the sentence beginning "Is it possible" and ending "or was I mistaken in diagnosing scarlet fever in the first instance" into an assumption of correctness. I began my letter by calling into question the first, second, third, and fifth points, and not only one. I therefore think that I am justified in coming to the conclusion that no weak point existed. From my own experience I have no hesitation in saying that the statement contained in Dr. Atkinson's letter that "one week may be considered as the shortest initial fever in scarlet fever" is altogether inaccurate. Dr. William Squire in "Quain's Dictionary of Medicine" says: "Sudden illness comes on within an hour of apparent health, or after a day or two's warning sensations in the throat." I have been able in very many cases to prove that this apparent health was a reality as far as it was possible for a medical man to judge. Personally, when in doubt, I act on the principle of preparing for the worst and take precautions for scarlet fever. This appears to me to be the safer plan when one bears in mind the awfully sudden void sometimes caused by scarlet fever in a family.

I am, Sirs, yours faithfully,

W. HAWKINS CUTHBERT, L.R.C.P., L.R.C.S. Edin.

Aberdovey, N. Wales, Dec. 6th, 1893.

"A LEICESTER HOSPITAL EXPERIMENT."

To the Editors of THE LANCET.

SIRS,—Your annotation under the above heading in THE LANCET of Dec. 9th comes at a most opportune moment. Would that it could be read, marked, learnt, and inwardly digested by each individual member of the foolhardy majority of the sanitary committee of the Leicester corporation before they have finally made arrangements to reopen the hospital so recently occupied by small-pox patients for the reception of scarlet fever cases, and whilst, indeed, some of such wards are still occupied by cases of small-pox. The only safe plan is for a small-pox hospital to be erected two or three miles away from the town in an isolated spot, in the meantime, and, until this town and neighbourhood are perfectly free from small-pox, to continue to treat such cases in the present hospital; then—as I have already suggested in the columns of our local press—"make a bonfire" of the present hospital and erect on its thus thoroughly disinfected site a hospital for scarlet fever cases on really scientific and sanitary principles. The scarlet fever cases had much better, for the present, continue to be treated at home than, by being taken to the hospital in its present condition, incur the risk of being brought within the radius of the contagium of small-pox. There is, again, no very great hurry, under the special circumstances of the case, for the scarlet fever cases to be isolated *in hospital*. This I can prove by statistics from my own practice. For example, I find that since Oct. 11th, 1892—at which time the first of my scarlet fever cases had to be treated at home in consequence of the outbreak of small-pox in the scarlet fever wards—in less than 10 per cent. of cases notified and attended by me has the disease spread to a second member of the same household. This shows, too, that isolation has been fairly well carried out at home. Then, again, this scarlet fever epidemic has, on the whole, been of a very mild type, so much so that some of the children attacked have had no medical man to attend them until it has been casually found out that they weredesquamating. It is therefore probable that such mild cases would have spread the disease just as much even if the hospital had been in a fit state for the reception of scarlet fever cases.

I am, Sirs, yours truly,

W. L'HEUREUX BLENKARNE,

Surgeon to the Leicester Provident Dispensary.

Humberstone road, Leicester, Dec. 11th, 1893.

SOCIETY FOR THE RELIEF OF THE WIDOWS AND ORPHANS OF MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—I notice in THE LANCET the advertisement annually put forth at this time of the year in the hope of inducing the younger members of our profession to make an absolutely safe provision for their widows and orphans. The Society is, to all intents and purposes, an insurance society, in which a premium of only two guineas per annum guarantees a provision for the widow and orphans of the payer should they be left in want. Of course, if a member leaves his family well provided for at his death his subscriptions go to support the widows and orphans of less fortunate members; but he has the satisfaction of knowing that, come what may, he has secured those who are dependent upon him from destitution.

I am, Sirs, yours obediently,

Dec. 4th, 1893. A VICE-PRESIDENT.

OBJECTIONABLE ADVERTISEMENTS.

To the Editors of THE LANCET.

SIRS,—The council of the Lancashire and Cheshire Branch of the British Medical Association passed the following resolution at their meeting held on the 7th inst.: "The council of the Lancashire and Cheshire Branch of the British Medical Association, having had their attention called to the insertion of indecent advertisements respecting female irregularities in the prominent daily and weekly papers, beg to condemn such advertisements as indecent and apt to encourage the adoption by pregnant women of means for procuring abortion."—I am, Sirs, yours faithfully,

Cardiff, Dec. 11th, 1893. T. GARRETT HORDER.

Owing to the pressure upon our columns several communications dealing with the Medical Defence Union and the London and Counties Medical Protection Society have been unavoidably held over.—ED. L.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

River Purification.

THE long-enduring policy of the Irwell and Mersey Joint Conservancy Board is at length beginning to bear fruit, if one may judge from two or three incidents which have occurred in this district since the date of my last letter. Notwithstanding the incomprehensible conduct of the Bury magistrate with regard to the prosecution of the corporation of that much-erring borough by the aforesaid joint committee—conduct, by the way, which has met with universal condemnation by the friends of sanitation in these parts—there are signs that many of the chief polluters of the Irwell and its tributaries are determined to turn over a new leaf. Only last week the recently incorporated and thriving borough of Middleton was honoured with a visit by two of the senior inspectors of the Local Government Board, for the purpose of inquiring into the merits of a scheme which the corporation had submitted to the Board with the object of dealing efficiently with the sewage of the town. The inquiry, which was of the usual formal character, took place in the borough town hall. The case for the corporation was ably put before the inspectors by Mr. Yates, recorder for Salford, who was instructed by the town clerk, the borough engineer, the medical officer of health and others being also present. The Middleton authorities propose to deal with their sewage by precipitation and afterwards to pass the effluent through polarite filters before discharge into the river Irk. The greater part of the site on which the works are to be constructed is within the borough of Middleton, but a few acres of it lie in the township of Blackley, which is now part of the city

of Manchester. Accordingly the city corporation were represented at the inquiry, Dr. Pankhurst, on behalf of Manchester, urging that unless certain conditions were observed Manchester would be seriously prejudiced by the proposed scheme. He particularly objected to the erection of a refuse destructor of the ordinary kind on the area of the proposed works, for the reason that as the latter were situated in a hollow, and several large and valuable residences within the Blackley township were within a few hundred yards of the works, the prevailing (S.W.) winds would inevitably carry the fumes from the destructor chimney into the residences above referred to. The Manchester corporation, however, offered no unreasonable objections to the scheme, which will probably receive the sanction of the Local Government Board.

Red Bank Medical Mission.

Last week the denizens of this poor and neglected Manchester district were largely represented at a mass meeting which was held to commemorate the seventieth birthday of Mr. Meacham, the honorary medical superintendent of the mission, who has laboured in that position for nearly half a century amongst the poorest and dirtiest population in the city of Manchester. Poor as the inhabitants undoubtedly are, they have managed to subscribe a sum of twenty-five guineas, of which they asked Mr Meacham's acceptance as a birthday gift. Those who know him, however, will not be surprised to hear that he declined to accept any personal reward in money from the poor creatures for whom he had sacrificed his time and money—aye, and much of his material prospects in life. He accepted, however, a short address of congratulation, and undertook to distribute the proffered purse of gold for the benefit of the sick poor of the district in which the money had been raised. It is to be hoped that the "dear old doctor," as he is locally called, will long be spared to carry on his beneficent work amongst the poor and the sick of Red Bank.

The Guardians and Women Inspectors.

At the last meeting of the Manchester guardians the excessive mortality amongst infants which has lately prevailed in the district of Ancoats was made the subject of discussion. One of the guardians, referring to the weekly returns of the medical officer of health, said that the hands of that officer should be strengthened so as to enable him to deal effectually with this blot on our social system. The subject of the employment of female inspectors, or health visitors, as instructors of poor mothers was discussed, the value of the officers now engaged in this work was warmly acknowledged, and the opinion was expressed that their number should be considerably increased, especially in neglected and overcrowded neighbourhoods like Ancoats, Angel Meadow, and Red Bank.

The New Medical Officer of Health.

Up to the present time nothing is known as to who is to be the successor of Dr. Tatham, who resigned his office in the early part of November. The council have formally accepted the resignation and have referred to the Town Hall Committee the whole question of the appointment of the new medical officer of health. At their meeting on Wednesday next this committee will present their report, which recommends that advertisements should be inserted in the medical and other papers inviting applications from medical practitioners between the ages of thirty and fifty years who are willing to devote their whole time to the duties of the office for a salary of £850 per annum. It will be interesting to know how many men of the right stamp will be found willing to accept the post and the salary.

Examiner in Hygiene.

It is an open secret that the governing body of the Victoria University are about to appoint an external examiner in hygiene and public health to assist the internal examiners in the various subjects of the curriculum for the diploma in public health. This step has been found necessary on account of the increasing importance which is now attached to public health teaching and to corresponding diplomas in the various universities and other licensing authorities of the country. At present the external examiner in hygiene examines in another subject also—namely, medical jurisprudence. It is believed to be the intention of the University to appoint separate examiners for the two subjects.

Dec. 4th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Edinburgh Medico-Chirurgical Society.

THIS society met last week, Dr. Clouston, the president, in the chair.—Dr. Elkins, of the Morningside Asylum, showed four female General Paralytics, and pointed out the respects in which they resembled and differed from typical cases of the same disease in men.—Dr. Sloan showed a young child who had recovered from Small-pox and a male patient who had very severe Herpes Zoster and Small-pox at the same time.—Mr. Caird showed a girl on whom he had performed gastrostomy for an Impermeable Stricture of the Œsophagus, the result of swallowing a corrosive, and who for three weeks before the operation had swallowed nothing and was at the time of the operation near to death from starvation. The patient was fed through an indiarubber tube, which was left constantly in the opening. There was no regurgitation and the girl was able to go about and perform hard duties. After the operation she gained rapidly in weight, an improvement due to his plan of making her masticate her food and then spit it into the funnel connected with the tube which led into the stomach.—Dr. Byrom Bramwell showed a case of Acromegaly in a woman six feet two inches in height and who weighed twenty-four stones eight pounds. He referred to the possible connection between the size of the pituitary body and gigantic stature. He had treated this patient with extract of pituitary body with, he thought, benefit to the patient's symptoms In a typical case of acromegaly in which he had used pituitary extract the symptoms had been aggravated.—Mr. Cotterill showed the parts from a case of Malignant Disease of the Larynx and Œsophagus in which he had performed tracheotomy and gastrostomy which had prolonged the patient's life for five months and given her comparative comfort during that period.—Dr. Graham Brown gave the outline of a paper on Certain Changes in the Circulation produced by Pyrexia. By means of an instrument, which he showed to the society, he had been able to determine the viscosity of blood and of its chief constituents, and the resistance which these offered at varying temperatures when flowing through capillary tubes. The results of the inquiry were as follows: solutions of the mineral salts contained in blood, of serum albumen, serum globulin, and of fibrinogen were all found, as regards temperature, to follow the law of Poiseuille: $P-1=1+\cdot03368\Gamma+\cdot000221\Gamma^2$ (where T = degrees Centigrade). The same law governed the flow of serum and of blood plasma, and he showed that, if this held good for blood in the living vessels, a rise of temperature from the normal point to 107° F. would so influence the flow that if the heart pressure and other conditions remained uniform, about one-tenth more blood would pass through a capillary in any given time than would be the case at a normal temperature; or, if the amount of flow remained constant, the heart would be saved one-tenth of its work when the temperature rose to the point named. He went on to show that the presence of corpuscles introduced other factors besides the mere viscosity of the fluid, and that these tended to heighten the effect of temperature changes on the flow of blood. He concluded by indicating that this appeared to be one of the ways in which pyrexia was of benefit to the organism.—Mr. A. G. Miller then read a Note on Bier's New Method of Treating Strumous Diseases of the Extremities by Passive Congestion. He had not obtained the brilliant results which Bier claimed to have obtained; but he thought the method was a useful auxiliary to other treatment. In some skin eruptions of the extremities he had found the method of passive congestion very beneficial. In the discussion which followed, Mr. Caird referred to the considerations which had led Bier to adopt this plan of treatment, and he read part of a letter from Bier, in which he said, "Under treatment with the hyper-oxygenation method we have at present about 150 cases. A local tuberculosis which has not softened, and which has not yet broken through the skin, is with this method absolutely brought to healing, but at the same time you must remember that the treatment may have to endure for a year or perhaps longer. If there are great deposits of tubercle in the bones then you find that very rapidly under this treatment cold abscesses ensue. They must be opened and injected with iodoform and glycerine ..... If you wish to try the treatment, begin with cases in which the skin has not yet given

way, because in the method you require a great deal of experience and, above all, a great deal of patience." Dr. Norman Walker bore testimony to the benefit of the treatment in tuberculous skin affections of the extremities.—Mr. Caird described the operation of gastrostomy after the method of Wietzel. The patient he had shown had been operated on by this method, and he had with equal success performed it on another patient. The ordinary incision was made, and the stomach taken out and opened and a tube passed into it. The stomach wall was so stitched over the tube and to the parietes as to form a tunnel or artificial œsophagus in which the tube lay and through which no regurgitation took place. Where practicable the tube was ultimately removed, and it was found that when this could be done the sinus healed without difficulty. He considered the method much the best way of performing gastrostomy.

Hospital for Sick Children, Aberdeen.

Much to the regret of his colleagues on the staff and of all interested in the above institution, Dr. John Gordon has resigned the office of junior surgeon. This step has been necessitated by the pressure of other duties—notably, those connected with his appointment as assistant professor of materia medica in the university. For the vacancy the following gentlemen are said to be candidates: Dr. Findlay, Dr. Kelly, Dr. Marnoch, Dr. J. Scott Riddell, and Dr. Rose.

Medico-Chirurgical Society, Aberdeen.

The usual monthly meeting of this society was held on the 7th inst.—Dr. Gordon read the notes of a case of Psoriasis Syphilitica treated by thyroid extract, and the patient, who was exhibited, showed marked improvement. Dr. Gordon also read short notes of a case of Aneurysm of the Aorta Bursting into the Pericardium.—Dr. R. J. Garden read notes of a case of Calculus Vesicæ in a child of seven years where the calculus had ulcerated into the vagina. Suprapubic lithotomy was performed, but it was found impossible to remove the stone by that means, and with considerable difficulty it was ultimately extracted per vaginam. A good recovery was made, but a large vesico-vaginal fistula still remains, and the child is being kept under observation.—Dr. Rose brought forward a motion that conjoint meetings of the Medico-Chirurgical Society, and of the Aberdeen, Banff, and Kincardine Branch of the British Medical Association be held monthly, the meeting-place to be alternately the Medico-Chirurgical Society's Hall and the rooms of the other Society. The previous question was moved and an equal number voted for each; the chairman, Professor Stephenson, declined to give his casting vote.

☞ It is reported that the Marquis of Huntly, Lord Rector of the University of Aberdeen, has appointed Dr. Alexander MacGregor to be his assessor in the University, in accordance with the express desire of the students' representative council.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

Death of Mr. Francis William Greene, M.B. T.C.D., of Mallow.

I REGRET to announce the death of this gentleman, which occurred on the 8th inst. at his residence in Mallow, county Cork, from typhoid fever. At first it was thought that he was suffering from influenza, but afterwards typhoid fever was diagnosed. Deceased was a graduate in arts and medicine of the University of Dublin and had a good practice in Mallow and surrounding districts. He was the eldest son of the late Rev. T. F. Greene of Kilmanalgh, county Wicklow.

Hereditary Longevity.

In the September quarter the death of a man who died at Ballyduff, in the Lismore union, aged 102 years, was registered. His father died when 105, his brother at 103, and two sisters at 103 and 104 years respectively.

Cork District Lunatic Asylum.

The salary of Dr. Woods, resident medical superintendent of the Cork District Lunatic Asylum, has been increased by £100 a year.

Medical Magistrates.

The Lord Chancellor has appointed Mr. Ringwood of Kells and Mr. F. J. Falvey of Tralee justices of the peace: the former for county Meath and the latter for county Kerry.

Dec. 13th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

An Antirabic Institute at Marseilles.

As is well known, the exuberant *méridional* of Marseilles regards Paris as a fairly successful imitation of his native town. He is nevertheless fain to confess that Paris is in some ways ahead of the southern seaport, the existence of the Pasteur Institute in the Rue Dutot being a proof of this fact. Since Friday last, however, this superiority has disappeared, for, on that day, there was inaugurated at the Château du Pharo an institute for the treatment by inoculation of hydrophobia. Dr. Flaissière, the Mayor of Marseilles, presided, and in the course of an eloquent discourse announced that the direction of the establishment would be confided to Dr. Livon, Director of the Marseilles Faculty of Medicine. This is the first Pasteur institute founded on French soil out of Paris. A letter was read from M. Pasteur apologising for his absence, and wishing the new enterprise every success.

Floating Kidney in the Female.

At the Société Médicale des Hôpitaux on Dec. 8th M. Albert Mathieu communicated the results of his researches upon the conditions attending this affection as found in the female sex. Of 306 women treated for divers maladies in hospital, 85 of them were found to be the subjects of abnormal mobility of the kidney. In women suffering from grave forms of dyspepsia the condition was much more frequent, no fewer than 32 out of 46 patients being a prey to it. Thus floating kidney is discoverable in 25 per cent. of female hospital patients taken haphazard, and in a much larger percentage in dyspeptic women. The affection is rarer below than above the age of twenty years. From fifteen to twenty years the proportion is from 12 to 13 per cent.; from twenty to twenty-five years 22 to 23 per cent.; from twenty-five to fifty years about 40 per cent., and from fifty to seventy years only 25 per cent. In one-half the cases only a part of the organ can be felt; in the rest the whole of the kidney can be isolated, and, exceptionally, it is completely floating. The influence of pregnancy in inducing the condition is indubitable, since 104 nulliparæ only yield 11·54 per cent. of nephroptosics, as against 33·8 per cent. amongst 130 uni- and multiparæ. Dyspepsia, generally mild, and mostly of the atonic type, was noticed in 68 or 69 per cent. of the cases, as against 40 or 41 per cent. amongst women exempt from floating kidney; but two-thirds of the women actually under treatment for severe dyspeptic troubles had movable kidneys. This leads to the conclusion that some relation of cause and effect exists between the two conditions. Once the dyspepsia is established it is probably kept up by the unnatural mobility of the kidney. The symptoms most commonly met with as the result of nephrotosis are *crises gastriques* (pain and repeated vomitings) analogous to the attacks experienced by tabetics. Whenever such attacks occur in the female a search must be made for floating kidney. At the same time it must not be forgotten that the degree of severity of the dyspeptic symptoms bears no constant relation to the degree of mobility of the kidneys. This nephroptosic dyspepsia is frequently associated with neurasthenia, which is apt to manifest its presence by neuralgic pains, principally involving the abdomen. Such patients lapse easily into morphinomania. M. Mathieu has nothing new to suggest in the way of treatment. During the attacks of pain and vomiting rest in the dorsal decubitus in the intervals, the wearing of an abdominal binder, and, finally, in very aggravated cases, surgical intervention.

A New Test for Albumen.

M. Spiegler has devised a test for albumen which is said to be endowed with extreme delicacy, its sensibility being 1 in 350,000. It is prepared as follows: Perchloride of mercury, 2 parts; tartaric acid, 1 part; distilled water, 50 parts; glycerine, 5 parts. The urine to be examined is first rendered strongly acid with acetic acid and filtered. With a pipette some of the filtered urine is dropped on to the surface of 2 c.c. of the testing fluid. The presence of albumen is revealed by the development of a white ring at the point of contact of the two liquids. The presence of peptones does not interfere with the success of the analysis.

French Medical Legislators and the Explosion at the Chambre des Députés.

Our French *confrères* have always been numerous in the ranks of the legislators who sit at the Palais Bourbon. The

sensational bomb explosion of Saturday last brought this fact into relief, for amongst the doctors regularly attached to the Chamber and the internes of the Hôtel-Dieu there could be seen actively ministering to the wants of the wounded such doctor-deputies as MM. Vigier (Minister of Agriculture), Bizarelli (a Quæstor of the Chamber), Chassaing, de Mahy, and others. It may truly be said that the medical man can do useful service wherever he may be.

Dec. 12th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Influenza in Austria.

DURING the last ten days influenza has been prevailing in Vienna as well as in some of the Austrian provinces, especially in Upper Austria and Moravia. The disease itself, however, has assumed a mild form this year, and even the catarrhal symptoms have been less grave than in the previous epidemics, though the fever has been high for one or two days in most of the cases observed. It will be difficult to obtain trustworthy statistics as to the spread of the epidemic, as influenza is not always notified to the sanitary offices.

The Treatment of Deaf-mutism.

At the last meeting of the Vienna Society of Physicians an interesting lecture was delivered by Professor Urbantschitsch, who showed five cases of deaf-mutes treated by Herr Kühnel, a teacher of deaf-mutes. Three of these cases were those of acquired and two of congenital deaf-mutism. The procedure consisted of systematic auditory exercises. At first single vowels were repeated, then single consonants, and later whole words and sentences were spoken, and the patients were encouraged to repeat them. The results obtained after very persistent efforts were in some of the cases shown to the Society. Some of these deaf-mutes who had been under this training for two months only could easily reproduce whole sentences spoken to them and could answer questions, but the enunciation was very defective. Two years ago a suggestion was made by an anonymous writer in the *Wiener Medicinische Blätter*, in an article entitled "The Use of the Phonograph in Medicine," that the phonograph might be brought into use for the benefit of deaf persons.

Iodide of Potassium in Cretinism.

At a time when the use of thyroid juice is being highly recommended as a useful remedy in cases of cretinism, it will be interesting to note that similar therapeutic results may be obtained in cretinism by the use of iodide of potassium. A communication made by Dr. Schweighofer at the last meeting of the Styrian physicians at Gratz stated that he had succeeded in benefiting a sufferer from cretinism by the internal administration of iodide of potassium. A female cretin aged twenty-one years with myxœdema and goitre received daily from one to two grammes of the drug from February to November of this year. Under this treatment the myxœdema disappeared and the goitre became smaller. The features of the patient lost their languid character and became more active, and her voice and intelligence improved. It was possible now to instruct her in needlework and simple calculations. It was also interesting to observe that during the intervals, when the treatment was stopped on account of catarrhal symptoms produced by the remedy, the myxœdematous symptoms became aggravated. It may be remarked that the myxœdematous swelling of the nasal mucous membrane also disappeared under the treatment. As in Styria there is a large number of cretins it will be possible to test the value of this treatment.

Dec. 4th.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an ordinary meeting of the Council of the Royal College of Surgeons of England, held on the 14th inst., Mr. J. W. Hulke, F.R.S., President, in the chair, the minutes of the ordinary Council of Nov. 9th were read and confirmed.

The financial arrangements of the two Colleges were fully discussed on the report of the Finance Committee and approved; but the report was not issued.

A report was read from the committee on regular meetings of Fellows of the College. This was approved and adopted with some alterations, and referred to the committee to draw out and submit to the Council regulations to give effect to the amended report.

Obituary.

WM. KIRKPATRICK McMORDIE, M.D.

THE death of Dr. W. K. McMordie, which took place at his brother's residence near Belfast on Dec. 7th, at the early age of forty-nine years, has been a source of deep regret to all who knew him. Dr. McMordie was educated at Queen's College, Belfast, where he was a scholar, and in 1868 he graduated M.D. in the late Queen's University. After practising for some years in Portadown he went to Belfast and decided to devote himself to gynæcology, and with the aid of the late Mr. Benn he established the Samaritan Hospital, where up to about two years ago he was the surgeon in charge, and where he gained considerable experience and reputation. For a time he was examiner in midwifery and in diseases of women in the late Queen's University. About two years since Dr. McMordie began to suffer from an affection of the nervous system, and gradually his constitution seemed to break up. Dr. McMordie was born at Seaforde, county Down, where his father was a Presbyterian clergyman, and his late brother, Dr. Hans McMordie, was well known in the North of Ireland as a distinguished member of the legal profession. The funeral took place on Dec. 9th.

ARTHUR W. EDIS, M.D., F.R.C.P.

WE regret to announce the death of Dr. A. W. Edis, who died last week after having undergone an operation for hernia. Dr. Edis, owing to increased pressure of private practice, had a year ago relinquished his last acting appointment as physician to the Chelsea Hospital for Women. He had previously, in the first place, resigned his post of physician to the British Lying-in Hospital, and in the second place that of obstetric physician to the Middlesex Hospital. At one time he was also assistant physician to the Soho Hospital for Women. This position he did not hold for any lengthened period. Before settling in practice in London as a gynæcologist he attended hospital practice in Paris and Vienna. Dr. Edis was the author of a manual of "Diseases of Women," and contributed various papers to the Obstetrical and Gynæcological Societies of London. He had held the posts of secretary of the Obstetrical Society of London, and president of the British Gynæcological Society. He was an Honorary Fellow of the Gynæcological Society of Boston, U.S.A. He graduated at the University of London as a Doctor of Medicine in 1868, and in 1879 was elected a Fellow of the Royal College of Physicians. Dr. Edis was cremated on Monday last at Woking.

HABIT IN MAN.—At a meeting of the members of the Victoria Institute, held recently at their rooms in John-street, Adelphi, Dr. A. T. Schofield read a paper on the Formation of Habit in Man. After giving a few physiological details necessary to a partially uninstructed audience, he proceeded to discuss the two questions—Is there a mind apart from the brain? and, Can mind act on matter? To the first he replied in the affirmative, urging the value as evidence of knowledge and experience the phenomena of choice, memory, and attention, none of which can be accounted for by sensori-motor reflexes or other forms of nerve action. With regard to the second question, which, it will be seen, is really an off-shoot of the first, Dr. A. T. Schofield considered that habits produced absolute nerve fibres in the brain, connecting physically the groups of cells concerned in their performance. Habit is thus physical memory; memory psychical habit. In conclusion, he showed that the leading advantages conferred by habit were economy of force, speed, accuracy, ease, formation of character, and skill.

Medical News.

THE firm of Nobel has given £1000 towards the St. Petersburg Institute of Experimental Medicine.

OUTBREAK OF RABIES IN THE NORTH OF ENGLAND.—This outbreak appears to have originated in Widnes, where one or two cases had been recently observed. The affected animals were killed, and the veterinary inspectors discovered, on post-mortem inspection, evidence of the existence of epidemic rabies in each carcass.

ROYAL BRITISH NURSES' ASSOCIATION.—The sixth annual conversazione of this association was held at the Princes' Hall, Piccadilly, on the 7th inst., and was attended by something like 1000 members. Prior to the commencement of the proceedings a telegram was received announcing the regrettable fact that the president, the Princess Christian, would be unable to be present on the occasion. In lieu of her Royal Highness the guests were received by Sir J. Crichton-Browne, Mr. Pickering Pick and Miss Stewart.

DISEASED MEAT PROSECUTION.—By the energy of the meat inspectors at Birkenhead some samples of meat which on inquiry were found to belong to a cow affected with pleurisy were adjudged by the magistrate to be unfit for human consumption, and an order was therefore issued for their destruction. Though medical opinion is not perfectly unanimous as to the extent to which the ingestion of unsound meat is injurious, there can be no doubt that the magistrate acted wisely in ordering the samples to be destroyed.

THE ULSTER MEDICAL SOCIETY'S DINNER.—The annual dinner of the Ulster Medical Society was held at Thompson's Restaurant, Belfast, on Thursday, Nov. 30th. The president (Professor Byers, M.D.) occupied the chair, and between fifty and sixty members were present, amongst the guests being the Lord Mayor of Belfast, the President of Queen's College, Dr. W. Thornley Stoker (President of the Dublin Branch of the British Medical Association and Vice-President of the Royal College of Surgeons in Ireland), and Dr. J. C. Hall of Monaghan (President of the North of Ireland Branch of the British Medical Association). After the toasts of "The Queen" and "The Lord-Lieutenant and Prosperity to Ireland" (to which Mr. John Fagan responded) had been proposed by the president, Dr. W. Thornley Stoker gave the toast of "The Queen's College and Belfast Medical School," and referred in very flattering terms to the high position the medical school in Belfast had attained and to the admirable way in which the students going from it to Dublin for examination in the Royal University were prepared. The President of Queen's College and Professor Cuming replied. Dr. J. Walton Browne then proposed "Our Guests," to which Sir Daniel Dixon (Lord Mayor), Dr. W. Thornley Stoker, and Dr. J. Campbell Hall responded. The "Ulster Medical Society" was then given by the President of Queen's College, to which Professor Byers replied, and proposed "The Health of the secretary, Dr. McKisack," to whose unceasing exertions the success of the dinner was due. During the evening an excellent programme of vocal music was gone through by Mr. W. G. Mackenzie, Dr. Leslie, Dr. M'Caw, Dr. Hugh Lewers, and Dr. McKisack, the accompaniments being played by Dr. Lindsay.

THE METROPOLITAN ASYLUMS BOARD.—The report of the year's work of this board—the seventh consecutive year's statement—gives a very good idea of the great and increasing labours and responsibilities of the Metropolitan Asylums Board. From the report of the Statistical Committee it appears that an unprecedentedly large number of patients suffering from infectious diseases have been treated during the past year in the hospitals of the board. We briefly advert to some points of interest. The number of patients, with those remaining in hospital at the close of 1891, made a total of 18,471 admissions from fever and small-pox during the year. There were 13 093 cases of scarlet fever, 2009 of diphtheria, 430 of enteric fever, 19 of typhus fever, and 725 of other diseases. The small-pox cases numbered 348, and were more numerous than in any year since the last epidemic of 1885. The hospital accommodation had to be greatly increased, and in addition provision had to be made for a threatened invasion of cholera in the autumn. A special committee was appointed and arrangements were made having upwards of 2000 beds available for cholera cases in general hospitals, workhouse infirmaries and other institutions. Arrangements had also to be made for organising the necessary amount of sick transport in case of need. In regard to the mortality from scarlet fever and diphtheria the figures show that the number of deaths was somewhat greater amongst the cases treated in the board hospitals than amongst those treated in their own homes; in the case of scarlet fever the percentages were 6 4 as compared with 2 3, and in diphtheria cases the death-rate was 22 5among those treated at home as compared with 29·1 among patients treated in the board hospitals. The scarlet fever and diphtheria death-rates in the board hospitals, it should be added, have shown marked decreases of late years as compared with former periods. The total number of removals of patients effected by land and river ambulances numbered 152,465. The board, on Mr. Mann's proposal, decided to order plans for another permanent fever hospital at Shooter's Hill. Mr. Mann said that double the number of existing beds for infectious disease—i.e., 6800 instead of 3400—would not be an excessive provision. The board also considered a statement by Mr. Mann as to the great demand for information about the number of refusals of admission into the hospitals. Such information could not be given, as the board had no record of all the cases dealt with by the local sanitary authorities, who only applied for admission for the most urgent cases. In one case, for example, a medical officer applied for admission for twenty urgent cases, having 171 others. The actual admissions Mr. Mann reckoned to be about 55 per cent. of the notifications.

FOOTBALL CASUALTIES.—During a match on the 2nd inst. at Hartham between the Caxtonian and Hoddesdon teams a player fractured his clavicle.—While playing in a match on Saturday last at Kensal Rise between the Westminster and Dental Hospitals one of the former side fractured his fibula.

THE HIGHEST LEVELS AND SUBSOILS OF THE PARISHES WITHIN TWENTY MILES OF LONDON.—The *Land Roll* for December, published by Messrs. Dowsett and Co., 3, Lincoln's-inn-fields, contains a list of about 300 parishes, showing at a glance their highest levels and subsoils. It is of considerable value, on the score of health, to know where around London are the high levels and the dry, healthy soils.

SOUTH WALES UNIVERSITY COLLEGE.—The council of this college have resolved upon the purchase from the infirmary committee of the college buildings, in accordance with a notice to that effect given at a former meeting of the council. The corporation of Cardiff have voted £10,000 to meet part of the cost of the purchase. The opening of the medical school in connexion with the college is fixed to take place on Feb. 14th next.

BEQUESTS AND DONATIONS TO HOSPITALS.—The Grocers' Livery Company has granted a donation of £50 to the Metropolitan Dispensary, Cripplegate, and the Mercers' Livery Company £21.—The late Mrs. Edwards, widow of Mr. John Edwards, a past-master of the Loriners' Livery Company, has bequeathed £100 each to the National Hospital for the Paralysed and Epileptic, Bloomsbury, to St. Mary's Hospital, Paddington, and to the Hospital for Sick Children, Great Ormond-street; and £200 each to the Cancer Hospital, Brompton, and to the Middlesex Hospital, for the benefit of the Cancer Ward.—The late Mr. Geo. Hatton of Ledbury has bequeathed £500 to the Ledbury Cottage Hospital.—The Bazaar which the Duchess of Montrose recently opened at Glasgow realised the sum of £11,000 for the Hospital for Incurables at Broomhill.—Miss E. J. P. Willes, late of Branwoods, Great Baddow, has bequeathed £5000 to the Essex and Colchester Hospital, and £2500 to the Chelmsford Infirmary and Dispensary.—The late Mr. Arthur Hutchinson of Hagley-park, Lugwardene, Herefordshire, has bequeathed £500 each to the Bury and the Hereford Infirmaries.—Mr. J. S. Turner, late of Bath, has bequeathed, free of legacy duty, £500 to the Royal United Hospital, Bath, and a further sum of £3000 upon the death of his widow.—The Goldsmiths' Livery Company has made grants of £100 each to the Royal National Hospital for Consumption, Ventnor, and the Seaside Convalescent Hospital, Seaford.—The directors of the Dunoon Convalescent Homes have received £100 from the trustees of the late Mr. John Hughes of Bridgeton.

ANTHRAX.—In the course of the present week Mr. Wynne Baxter held an inquest on the body of a man, aged 64, who resided in Mile-end. The evidence went to show that the deceased was a carman and in the course of his work a few weeks ago he had the misfortune to scratch his hand, which began to swell and to become very painful, so much so that he sought relief at the Poplar Hospital, where he was attended by Mr. T. E. Bowkett, who gave evidence at the inquiry that the deceased had, after much suffering, succumbed to the poison of anthrax.

DR. ANDREW DENHOLM, of Chorlton-cum-Hardy, near Manchester, has had presented to him by a numerous list of subscribers, headed by the late Sir Andrew Clark and Sir William MacCormac, a testimonial expressing their sympathy with him. The testimonial was accompanied by a handsome and massive silver salver, with the following inscription:—"Presented to Andrew Denholm, M.D., C.M., by Sir Andrew Clark and other professional brethren, who sympathise most heartily with him in the matter of his recent action at law with Mr. Lawson Tait. October, 1893."

THE SOCIETY OF ARTS.—The council of this society have given notice that the next award of the Swiney Prize will be made on January 21st, 1894, the fiftieth anniversary of the death of Dr. George Swiney, who left £5000 to the society for the purpose of presenting a prize every year to the author of the best published work on medical jurisprudence. The prize consists of a cup of the value of £100 and money to the same amount. The award is made jointly by the Society of Arts and the Royal College of Physicians of London. Amongst the recipients of the prize was the late Dr. Meymott Tidy.

NATIONAL DENTAL HOSPITAL.—The annual dinner of the past and present students of this hospital was held in the Venetian Saloon at the Holborn Restaurant on the 6th inst., Professor Michael Foster, F.R.S., presiding. Amongst the guests were Dr. Sidney Coupland, Professors Victor Horsley and Sherrington, Messrs. Stanley Boyd, G. H. Makins, Spencer, Mummery, Smale, F. Canton, S. J. Hutchinson, and D. Hepburn. After dinner the dean read a short report, referring especially to the removal of the school to the new buildings at the corner of Devonshire-street. These are already occupied, but will be formally opened early next year by H.R.H. the Duke of York, who has consented to become president of the hospital. The chairman then distributed the medals and certificates to the successful students, and in proposing the toast, "Success to the National Dental Hospital and College," he alluded to the great advances which had been made in the practice of dental surgery and dealt with other important points in a cleverly worded speech, which was much appreciated. Sir James Crichton-Browne, F.R.S., responded for "The Visitors."

THE BOURNEMOUTH MEDICAL SOCIETY.—The annual general meeting of this Society was held on Tuesday, Nov. 14th, at the Imperial Hotel, under the chairmanship of Mr. Blake, retiring president. The following office-bearers were elected for the year 1893-94: President, Mr. Parkinson (Wimborne); vice-president, Mr. Embleton; hon. treasurer, Mr. Kinsey-Morgan; and hon. secretary, Mr. Lys. The annual dinner was held at the same date and place, twenty members and seven guests being present. The membership now numbers fifty-two. The first ordinary meeting of the session was held on Nov. 28th, at 8 P.M., at the society's rooms, Athenæum-chambers, Bournemouth, twenty-two members being present. Dr. Yair was elected a member of the society. The president delivered his address, in the course of which, looking back on thirty years of professional life, he touched upon the many changes that had occurred in the public relations of the profession as well as in the practice of the various branches of medicine and surgery. In particular he dwelt on the influence and future of bacteriology, the origin and treatment of diphtheria and influenza, the therapeutic value of salicin and the nitrites, the treatment of hernia, and also that of obesity. He likewise referred to the future of unqualified assistants and the influence which the profession might and should more largely exercise on public opinion in questions affecting the health and well-being of the community. A vote of thanks to the president for his address was proposed by Dr. Roberts Thomson, seconded by Mr. Allis Smith, and carried unanimously.

DWELLINGS OF THE POOR.—The monthly meeting of the Mansion House Council on the Dwellings of the Poor (of which the Lord Mayor is president) was held on Tuesday in the Long Parlour, Mr. James Hole in the chair. Mr. John Hamer (the hon. secretary) read the report of the work done during the month, which showed that insanitary conditions in Mile-end, Bethnal-green, Shoreditch, Hackney, St. Pancras, Poplar, Marylebone, Islington, Whitechapel, Fulham, Kensington, St. George's-in-the-East, Southwark, Chelsea, Limehouse, Paddington, Deptford, and the City had been dealt with. A suggestion for the better ventilation of sewers had been received from one of the local committees, and was ordered to be sent to the chief engineer of the London County Council. It was resolved to petition for the repeal of Section 63 of the East London Water Works Act, and also to promote, with all the influence of the Mansion House Council, the passing of the Bill to consolidate and amend the law relating to streets and buildings in London, which has just been read a first time.

PRESENTATION.—On the 5th inst. a number of the members of the Oldham Medical Society assembled at the Oldham Infirmary for the special purpose of expressing their sense of indebtedness to Dr. John Hodgson for his valuable services during the ten years in which he has acted as their hon. secretary. Dr. Fawsitt, the president of the society, explained the circumstances under which the testimonial, which consisted of an illuminated address and a cheque, was presented. Dr. Hodgson had been the first secretary of the society, and in the discharge of the duties of his office he had spared no pains to make it in every way a success. The address recited that, by reason chiefly of his unwearied endeavours, the medical society had every year seen an accession of strength, so that the society may now be said to include almost the whole of the profession in Oldham. Dr. Hodgson, in expressing his thanks for the honour conferred upon him, spoke of the gratification he had felt at receiving so marked a testimony of the approval of his medical brethren.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

AT the present time the routine work of the Legislature seems to be considerably hampered by the prevalence of influenza. Both the Speaker and the Sergeant-at-Arms are partially laid aside, whilst Sir Ellis Ashmead-Bartlett and Lord Frederick Hamilton are unable from the same cause to occupy their places in the House of Commons.

HOUSE OF COMMONS.

FRIDAY, DEC. 8TH.

Factory Inspection.

Captain Naylor-Leyland wanted to know whether one inspector of factories was sufficient to exercise supervision over four counties—viz., Norfolk, Suffolk, Cambridgeshire, and East Essex, a district which contained a population of 1,500,000, and whether the Home Secretary proposed to take steps to remedy the inadequacy of the inspection in that district.—Mr. Asquith admitted that the staff of factory inspectors both in the district referred to and elsewhere was undermanned; he had already increased it, and he hoped to make further additions to it during the ensuing financial year.

Animal Tuberculosis.

Sir Walter Foster, in reply to a question addressed to him by Viscount Wolmer as to the probable date at which the departmental report on animal tuberculosis might be expected, said that the Local Government Board had no later information on the subject than that given in the reply of the President on the 24th of last month. It was then stated that the whole of the experimental investigations were concluded, that the reports of two of the subcommissioners were printed, that the report of the third subcommissioner would probably be finished in a few days, and that on its completion the commission would meet to draft the final report, which would, it was expected, be issued during the present month.

Deaths from Starvation.

Mr. Keir Hardie inquired whether the return of deaths accelerated by privation within the metropolis in the year 1892 would be likely to be ready for early distribution.—Sir Walter Foster said the Local Government Board had received the returns furnished by the coroners in respect of deaths due to privation, and the Board had been in communication with boards of guardians with reference to cases of the kind mentioned, but the return had been delayed for the purpose of having appended to them certain observations required by the order of the House of Commons. The returns, however, would be issued very shortly.

MONDAY, DEC. 11TH.

Blind and Deaf Children.

Mr. Acland, replying to a question put by Sir E. Lechmere, said the Education Department proposed to put themselves without delay in communication with the conductors of all recognised schools or institutions established for the benefit of children of the above class who are sent by boards of guardians, in order that such schools may be certified in accordance with the provisions of the Elementary Education (Blind and Deaf Children) Act, 1893.

TUESDAY, DEC. 12TH.

Sick Leave in Government Departments.

Mr. Macdonald asked a question respecting the claim of servants in public departments to full pay in the event of sickness—a claim which, it would appear, had in some cases been disallowed.—Sir J. Hibbert said he was not aware of any intention on the part of the authorities to depart from the practice heretofore adopted.

The Unemployed.

Mr. Keir Hardie obtained leave to move the adjournment of the House in order that attention might be called to the great amount of distress prevailing amongst the working classes of the Kingdom, in some cases causing death and in others inciting to suicide. He urged that the Government was bound as far as possible to provide work for the unemployed, by the establishment of an eight hours day in Government factories and the provision of suitable accommodation for the aged poor.—Sir Walter Foster said the finding of work for the unemployed was one of the most difficult problems which a statesman could tackle. The statistics of deaths from starvation had been collected for the last eleven years, and judging from these statistics it would appear that the position of the country in respect of wealth distribution had improved rather than otherwise. It was no doubt true that there had been an increase in pauperism during the last few months, but he did not think there was cause for serious alarm.—Mr. Balfour said in his opinion the question of emigration from the rural districts lay at the very root of the problem. In such a gigantic population as that of London all the sores of social life were concentrated in such a comparatively small space as to strike the imagination in a way likely to make the evil appear greater than it really was.—Mr. H. Fowler said the Local Government Board were dealing most sympathetically with the applications made by the various unions in the metropolis. He felt confident that after the report of the commission presided over by the Duke of Devonshire had been presented the whole subject would be in a condition more favourable for discussion than was possible on a casual motion for adjournment of the House.

THURSDAY, DEC. 14TH.

The Fertilisers and Feeding Stuffs Act.

Several questions were addressed to the President of the Board of Agriculture with reference to the appointment of Chief Agricultural Analyst under the provisions of this Act.—Mr. Gardner replied that the appointment had not yet been made nor had the remuneration assigned to it been definitely settled by the Treasury.

Swine Fever.

In reply to a question by Mr. Fellowes, Mr. Herbert Gardner said that up to the end of last week swine fever had been ascertained to exist on 356 sets of premises since the Act came into operation on Nov 1st. As to restrictions on the movement of swine he was well aware of the value of such measures in preventing the spread of disease, but until they had obtained complete information as to the localities in which it was centred, they could not take action in that direction without giving rise to more inconvenience and loss than could be justified.

Examination of Meat Rations.

Mr. Hanbury asked the Secretary of State for War whether the medical officers of the Army are practically instructed in the examination of ration meat on entering the service; whether medical officers are always or usually placed on boards which report on the quality of the meat rations in the army at home and in India; whether the meat supplied to military hospitals, although dearer in price, is often inferior to the barrack ration meat; and whether medical officers are prevented from attending the meat-inspection classes at Edinburgh to which the other officers of the Army are sent?—Mr. Campbell-Bannerman replied that there was a published guide containing much valuable information for officers who had to examine meat issued to the troops, but practical instruction on the subject was only given to the officers of the Army Service Corps. Medical officers did not sit upon boards for meat inspection, but attended to give their opinion when required. Meat supplied to military hospitals was not inferior to barrack rations. On the contrary he was informed that hospital rations were of excellent quality. Meat inspection classes at Edinburgh and elsewhere were only for the Army Service Corps.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ARNOLD, G. J., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Department for Diseases of the Throat in St. Thomas's Hospital.

BIRD, G. W. H., B.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been reappointed Non-Resident House Physician to St. Thomas's Hospital.

CARDINALL, C. D., M.R.C.S., L.R.C.P., L.S.A., has been appointed Junior House Surgeon to the Western General Dispensary, N.W.

CHANCE, B. F., L.R.C.P., M.R.C.S., has been appointed Senior Obstetric House Physician to St. Thomas's Hospital.

COX, WALTER MUNDY, M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the Birmingham and Midland Free Hospital for Sick Children.

FISHER, J. H., F.R.C.S., L.R.C.P., has been appointed Junior Ophthalmic House Surgeon to St. Thomas's Hospital.

FITZGERALD, J. J., M.B., B.C. Irel., has been appointed House Physician to the Mater Misericordiæ Hospital, Dublin.

HEWETT, J. W., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Department for Diseases of the Skin in St. Thomas's Hospital.

HICKS, T. W., L.R.C.P., M.R.C.S., has been appointed Junior Obstetric House Physician to St. Thomas's Hospital.

HISLOP, P. W., M.B., M.S. Edin., has been appointed Medical Officer for the North Tawton Sanitary District of the Okebampton Union.

JORDAN, WALTER R., has been appointed as Extra Acting Physician to the Birmingham and Midland Free Hospital for Sick Children.

JACKSON, RICHARD H., M.R.C.S., L.R.C.P., has been appointed Senior House Surgeon to the Western General Dispensary, N.W.

JONES, C. J., L.K.Q.C.P. Irel., M.R.C.S. Eng., has been appointed Medical Officer of Health for the Rural Sanitary District of the Cardigan Union, vice Davies.

JONES, WILLIAM WATKINS, M.B., M.Ch. Edin., D.P.H. Camb., has been appointed Visiting Medical Officer to the South Wales and Monmouthshire Truants' School.

LITTLE, E., M.D., M.S. Irel., M.R.C.S., has been appointed Medical Officer for the Wimbledon Hospital for Infectious Diseases.

MERRY, W. J. C., M.A., M.B., B.Ch. Oxon., has been appointed Non-Resident House Physician to St. Thomas's Hospital.

MOORE, H. M., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant in the Department for Diseases of the Ear in St. Thomas's Hospital.

ORD, R. W., M.A. Cantab., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

PHILLIPS, HARRY HARDING, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon to the Charing-cross Hospital.

PLANCK, C., M.A. Cantab., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

PROBYN, PERCY J., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Skin Department, also Electro-Therapeutical Assistant, at Charing-cross Hospital.

PURVIS, W. P., M.B., B.Sc. Lond., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant in the Department for Diseases of the Throat in St. Thomas's Hospital.

REDPATH, W., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

RICHARDSON, S. W. F., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

RICKETTS, THOS. F., M.D. Lond., L.R.C.P., M.R.C.S., D.P.H., has been appointed Medical Superintendent of the Hospital Ships, Metropolitan Asylums District.

RUDALL, J. F., M.B., B.S. Melb., M.R.C.S., has been appointed Senior Ophthalmic House Surgeon to St. Thomas's Hospital.

RUSSELL, A. E., L.R.C.P., M.R.C.S., has been appointed Resident House Physician to St. Thomas's Hospital.

SHARMAN, HENRY, M.D. Lond., M.R.C.S. Eng., L.R.C.P. Lond. (late Resident Medical Officer, has been appointed Senior Clinical Assistant at the Hospital for Diseases of the Throat, Golden-square, W.

SHINE, J., M.B., B.C. Irel., has been appointed House Surgeon to the Mater Misericordiæ Hospital, Dublin.

SMITH, E., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

SMITH, WM. BARRON, M.R.C.S., L.R.C.P., has been appointed District Medical Officer to the Salford Royal Hospital, vice F. H. Folkes, deceased.

THOMAS, T. N., M.R.C.S., has been appointed a District Medical Officer for the Leicester Provident Dispensary.

THOMPSON, G. W., B.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been reappointed Resident House Physician to St. Thomas's Hospital.

WALLACE, G. S., F.R.C.S., L.R.C.P., has been reappointed House Surgeon to St. Thomas's Hospital.

WARNEFORD, S. W. C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Harbury Sanitary District of the Southam Union.

WEBB, WM. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Urban Sanitary District of the Kingsbridge Union.

WHITEHOUSE, EDWIN ST. JOHN, M.R.C.S., L.R.C.P., has been appointed Resident Surgical Officer to the Birmingham and Midland Free Hospital for Sick Children.

WILLIAMS, C. J., L.R.C.P., L.R.C.S., L.M. Edin., has been reappointed Honorary Medical Superintendent, Woodhall Spa Hospital.

WOODCOCK, A. H., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant in the Department for Diseases of the Ear in St. Thomas's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

COUNTY LUNATIC ASYLUM, Burntwood, near Lichfield.—Junior Assistant Medical Officer, unmarried. Salary commences at £160 per annum, with board, lodging, washing, and attendance.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, London, W.—Resident Medical Officer. Salary £50 per annum, with board and lodging.

JESSOP HOSPITAL FOR WOMEN, Sheffield.—House Surgeon, unmarried. Salary £50 per annum, with board, lodging, and washing.

LONDON SKIN HOSPITAL, 40, Fitzroy-square, W.—Secretary. Salary £80 per annum, or £60 with residence.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon, for six months. Board, lodging, and washing provided.

ROYAL SOUTH LONDON DISPENSARY, St. George's Cross, S.E.—Surgeon-in-Ordinary for the Waterloo district. Honorarium £20 per annum.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Assistant House Surgeon, for six months. Salary at the rate of £50 per annum, with board and lodging. Stimulants and washing not provided.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL, London.—Assistant Lecturer in Obstetric Medicine.

THE ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge-road, S.E.—Anæsthetist and Registrar, for twelve months. An honorarium of 20 guineas is given.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea, S.W.—House Physician to the in-patients. Honorarium £50 per annum, and board and lodging in the Hospital provided.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea, S.W.—House Surgeon to the in-patients. Honorarium £50 per annum, and board and lodging in the hospital provided.

WALLASEY DISPENSARY.—House Surgeon, unmarried. Salary £140 per annum, with furnished house, coal, and gas.

Births, Marriages and Deaths.

BIRTHS.

BEAUCHAMP.—On Dec. 13th, at Cromwell-road, the wife of Dr. Sydney Beauchamp, of a daughter.

GREEN.—On Dec. 5th, at Rutherglen, Woodside, South Norwood, the wife of Edward F. S. Green, M.D., of a son.

KELLETT.—On Nov. 27th, at Lewisham-road, S.E., the wife of Dr. A. F. Kellett, of a daughter.

REICHARDT.—On Dec. 7th, at Dorset House, Ewell, the wife of E. Noel Reichardt, M.B. Lond., of a daughter

SILCOCK.—On Dec 6 h, at Sesfield-road, West Brighton, the wife of Surgeon-Major Silcock, M.D., I.M.S., of a son.

SMYTH.—On Dec. 11th, at Castelnere, Adelaide-road, Brockley, S.E., the wife of F. Sydney Smyth, F.R.C.S., L.R.C.P., of a son.

STOCKER.—On Dec. 10th, at Weedon, Northamptonshire, the wife of E. Gaved Stocker, M.R.C.S., of a daughter.

MARRIAGES.

DENT—PARK.—On Dec. 6th, at St. Barnabas Church, Kensington, Louis William Dent, M.R.C.S., L.R.C.P., of South Woodford, to Emma Kennedy, third daughter of the late Rev. John Park, formerly Vicar of Rampside, Lancashire.

MACLEAN—HILDER.—On Dec. 7th, at St. Peter's Church, Woking Village, James Newlands Maclean, M.B., C.M., of Upper Tooting to Florence Grace, youngest daughter of Mr. Edward Hilder, Hoe Bridge, Woking

ROBINSON—MILLING.—On Dec 12th, at St. James's Church, Tunbridge Wells, by the Rev. M. J. Milling, Vicar of Ashton Keynes, Wilts, brother of the bride, assisted by the Rev. Alfred Robinson, Vicar of St. Peter's, Humbleton, East Yorks, uncle of the bridegroom, Henry Betham Robinson, M.S., M.D. Lond., F.R.C.S. Eng., of 1, Upper Wimpole-street, W., eldest son of Henry Robinson of York-crescent, West Norwood, to Evelyn Louise (Eva), youngest surviving daughter of the late John Milling of Harlow Manor, Harrogate.

STONEY—MORGAN.—On Dec. 9th, at St. Mary Abbott's, Kensington, Ralph Stoney, M.D., to Stella, eldest daughter of Mr. Edmund C. Morgan, of 7, Roland-gardens, South Kensington.

DEATHS.

CORNER.—On Dec. 7th, at his residence, Mile End-road, E., Matthew Corner, M.D., M.R.C.S., L.S.A.L., in his 63rd year.

EDIS.—On Dec. 9th, at Wimpole-street, Arthur Wellesley Edis, M.D., F.R.C.P., aged 53.

HARLE.—On Dec. 6th, at Darnley-road, N.E., Ezra Harle, M.R.C.S., L.S.A., in his 78th year.

YOUNGER.—On Nov. 26th, on board the s.s. *Rome*, on the homeward passage from Bombay, aged 28, Surgeon-Captain Henry James Younger, Indian Medical Service, son of George Younger, Lynedoch-crescent, Glasgow.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, December 14th, 1893.

	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Dec. 8	29·47	S.W.	46	45	53	50	40	..	Raining
,, 9	29·30	W.	44	43	64	47	42	·45	Overcast
,, 10	29·69	W.	42	41	50	48	37	·02	Cloudy
,, 11	29·45	S.W.	48	47	59	49	40	·08	Overcast
,, 12	29·53	S.W.	47	46	57	54	38	·03	Cloudy
,, 13	29·17	S.	54	53	65	58	43	·26	Raining.
,, 14	29·67	N.	42	40	51	43	40	·44	Overcast

Medical Diary for the ensuing Week.

Monday, December 18.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; and on Tuesday, Wednesday, Friday, and Saturday at the same hour.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2.30 P.M.; Friday, 2 P.M.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M.; and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2 P.M.; Thursday, 2 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.; and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL. Ear and Throat Department, 9 A.M.; Thursday, 9 A.M. Eye Department, 2 P.M.

ROYAL EYE HOSPITAL, SOUTHWARK.—Hour of attendance, 2 P.M., and on other days at the same hour. Operations daily.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.)—5.30 P.M. Dr. Morgan Dockrell: Diet and Baths.

Tuesday, December 19.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M. Skin Department, 1.45; Saturday, 9.15

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

PATHOLOGICAL SOCIETY OF LONDON.—Dr. Soltau Fenwick: Diphtheria of the Stomach.—Mr. F. T. Paul: Dermoid Cyst of the Face.—Dr. Felix Semon and Mr. Shattock: Sequel to a case of Anomalous Tumour of the Larynx.—Dr. Rolleston: Three cases of Mediastinal Abscess in connexion with the Œsophagus.—Mr. Howard Marsh: Stomach and Intestine from a case of Gastro-jejunostomy.—Mr. F. C. Wallis: Sacculated Bladder following Stricture of the Urethra.—Dr. Lee Dickinson: Myoma of the Uterus becoming Sarcomatous. Card Specimen:—Dr. Fyffe: Specimen from a case of Broncho-pneumonia.

Wednesday, December 20.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Thursdays and Fridays at the same hour.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1.30 P.M.; Saturdays, 2 P.M. Obstetrical Operations, Thursdays, 2 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday and Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M. Dental Department, 9.30 A.M. Eye Department, 2 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M. Surgical Visits on Wednesday and Saturday at 9.15 A.M.

EPIDEMIOLOGICAL SOCIETY OF LONDON (11, Chandos-st., Cavendish-sq.), 8 P.M. Dr. Wm Hunter: Bacterial Poisons—a Contribution to the Study of Infection.

ROYAL METEOROLOGICAL SOCIETY (25, Gt. George-st., Westminster).—8 P.M. Mr. Charles Harding: The Great Storm of November 16th to 20th, 1893.—Mr. S. Tomlinson: Rainfall and Evaporation Observations at the Bombay Water Works.—Mr. A. E. Watson: On Changes in the Character of certain Months.

ROYAL MICROSCOPICAL SOCIETY (20 Hanover-sq., W.).—8 P.M. Mr. T. F. Smith: On the Ultimate Structure of Pleurosigma Angulatum (with Lantern).—Mr. J. W. Gifford: New Screen for Monochromatic Light.

Thursday, December 21.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M. Ear and Throat Department, 9 A.M. Eye Department, 2 P.M.

NORTH-WEST LONDON HOSPITAL (Kentish Town-rd.).—Operations, 3 P.M.

HARVEIAN SOCIETY.—8.30 P.M. Prof. Corfield: Disease and Defective House Sanitation. Friday, December 22.

UNIVERSITY COLLEGE HOSPITAL.—Eye Department, 2 P.M.

Saturday, December 23.

UNIVERSITY COLLEGE HOSPITAL.—Skin Department, 9.15 A.M.

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

PUBLISHER'S NOTICE.

IN order to facilitate the work of reference to the volumes of THE LANCET, we have arranged to publish duplicate copies of the Index to each half-yearly volume in a form in which they may be subsequently filed or bound together. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Publisher of THE LANCET.

THE SODEN FUND.

IN referring last week to this case, we inadvertently omitted to instruct our readers where contributions should be sent. The Glamorganshire Banking Company, Swansea, or Mr. W. F. Brook, F.R.C.S., of Mount Pleasant, Swansea, will be happy to receive any subscriptions.

Dr. Wm. Huntly.—We regret that our correspondent's communication cannot now be inserted in our columns.

"LOCOMOTOR ATAXY TREATED BY PHOSPHATIC INJECTIONS."

To the Editors of THE LANCET.

SIRS,—At the risk of prolonging an undesirable discussion, will you permit me to say a few words on the subject of Dr. Forbes Winslow's letter in THE LANCET of Nov. 25th? Dr. Winslow informs the profession that a cure for locomotor ataxy is to be found in the injection of phosphate of soda "in combination." He was led to adopt this unpromising expedient by the rumour of certain proceedings in Belgium, and he recommends it on the strength of his experience in a single instance. The case reported by Dr. Winslow calls for no further comment. It has been adequately dealt with by your correspondent Dr. McNamara. Dr. Winslow's postscript adds but little difficulty. The fact that he took the unusual course of obtaining certificates of diagnosis suggests that his own mind was not made up. The certificate from the Belgian physician is applicable only to a *woman*—the form of the French word *atteinte* shows this—while the subject of the marvellous cure was a man. The certificate of Sir Andrew Clark deserves all respect and is very valuable, as it is probably a rare document; but it cannot be taken in lieu of the usual statement of symptoms. There remains no room to doubt that the case was one of mistaken diagnosis; and of this, as most neurologists will agree, no better proof is needed than the result—a complete cure, as attested by the "consultation in Belgium." It is of greater interest to inquire upon what grounds the expectation of a cure was based. I have made a diligent search for the record of these proceedings in Belgium. The most authoritative report seems to be that presented by M. Crocq of Brussels to the Academy of Medicine, at Paris, on Sept. 13th, 1892. It is short, and may be read with profit:—

"1. The subcutaneous injection of a 1 in 50 solution of phosphate of soda in cherry laurel water produces no reaction, local or general. 2. The injection upon nervous patients produces a powerful nervine effect. 3. This agent acts only as a nervine tonic, and its effects are either curative or palliative. They are curative only in cases of functional cerebro-spinal trouble; they can only be palliative in organic disease of the nerve centres. 4. The advantage of this method over those of Brown Séquard and C. Paul is in its simplicity. It is within the reach of everyone." (*Revue Médicale* (Louvain), Nov., 1892; *Bulletin de l'Académie de Médecine*, 1892, p. 433.)

This notice proves that the ground has already been covered, and there is no need of further experiments. The first paragraph robs the "method" of its air of mystery—a very desirable thing. The third disposes of its pretensions to cure locomotor ataxy. It confirms the natural expectation that the effect of injecting phosphate of soda is that which the drug is well known to produce when administered by the mouth. Some allowance must be made for the psychical influence of the hypodermic needle, and we are too apt to assume that organic disease implies the absence of a functional element, whereas, indeed, it renders its presence more probable. The fourth paragraph is instructive, and perhaps supplies the key to the matter. The "method" is there brought in line with certain practices that have become familiar. The injection of highly complex organic substances of which we know nothing for the cure of equally inscrutable diseases is a thing intelligible if not defensible. It requires on the part of its exponent a mind of a mediæval tendency combined with therapeutic enterprise and a faculty for ignoring the acquisitions of science. Such talents are common. Working in this direction they throw back on a species of pharmacy which only requires an incantation and the magic circle to give it the genuine impress of a very respectable antiquity. The art, however, as applied to a disease whose pathology is well-known is demonstrably out of place. But when for the mystic agent there is further substituted a simple inorganic substance such as phosphate of soda, it is difficult to detect a spot where credulity can lurk. Meanwhile the unfortunate subjects of locomotor ataxy are athirst for information; they will clutch at any straw. Already they are clamouring for phosphate of soda, and in many instances will have it. Under these circumstances I trust that the information I have quoted will enable the practitioner to moderate the hopes of his patient, and in the last resort to officiate himself at the rites so vaguely sketched by Dr. Winslow. So may we pass more speedily and with least discredit through the throes of the latest discovery.

I am, Sirs, yours faithfully,

Wimpole-street, W., Dec. 11th, 1893. JAMES CAGNEY.

To the Editors of THE LANCET.

SIRS,—Dr. Winslow's reply to my note of the 2nd inst. does not touch my criticism. For a proof that his case was one of locomotor ataxy, it is not the opinion of any man, however eminent, we want, but all the signs and symptoms of the case. The signs which he has already enumerated were, I repeat, no proof at all of locomotor ataxy.

I am, Sirs, yours truly,

J. MCNAMARA.

Milson-road, West Kensington Park, W., Dec. 12th, 1893.

"TREATMENT OF DIPHTHERIA BY INSUFFLATIONS AND TABLOIDS OF SULPHITE OF MAGNESIUM."

To the Editors of THE LANCET.

SIRS,—I feel called upon to reply to the letters which have from time to time appeared in THE LANCET on the above subject since mine of Nov. 4th. I have already dealt with that of Mr. Gilchrist Burnie, which appeared in your issue of Nov. 11th, and I do not wish to add anything thereto. I regret to say I cannot agree with him as to the efficacy of magnesium sulphite in cases of scarlet fever, as mentioned in his communication of the 25th ult. My experience has led me to the conclusion that its use in this disease, if not absolutely injurious, is of no avail. I would suggest as a reply to Mr. Offord (Nov. 18th) that the magnesium sulphite used by him was possibly that of commerce, which is impure, being usually prepared by double decomposition between magnesium sulphate and neutral sodium sulphite. Now the latter invariably contains more or less sulphate, hence the resulting product will contain both magnesium and sodium sulphates. The magnesium sulphite manufactured for me by Messrs. Burroughs, Welcome, and Co. is prepared by the action of purified sulphurous acid upon pure magnesia, and is in the form of a yellowish white crystalline powder, which becomes gradually oxidised when exposed to light, and it is absolutely pure. To Dr. Adams I would remark that sulphur is frequently charged with impurities precipitated sulphur often containing a large percentage of sulphate of lime, while sublimed sulphur is frequently almost insoluble in benzol and other solvents. Sulphurous acid spray, which has been used by some practitioners, is open to the objection that it quickly becomes oxidised to sulphuric acid, and may have a cauterising effect, possibly the same objection may attend its fumes. On the other hand, magnesium sulphite coming into contact with the wet mucous surface develops sulphurous acid, and so exerts the prompt solvent effects observed upon diphtheritic and aphthous parasitic growths. To Dr. Gowan I offer my sincere thanks for suggesting a fair trial to the drug. This is what I solicit. I court inquiry and criticism, and I will take it as a very great favour if those who do give it a trial will communicate with me. If successful it will be a matter of deep gratification; if unsuccessful, I may be able to point out the cause, for I am convinced that almost every case of diphtheria is recoverable if taken in time.

I am, Sirs, yours truly,

BROWNLOW R. MARTIN.

Shaftesbury-road, Ravenscourt-park, W., Dec. 12th, 1893.

SULPHURIC ACID LEMONADE.

To the Editors of THE LANCET.

SIRS,—Would any of your correspondents kindly inform me through your columns of a cheap and easy way of making the sulphuric acid lemonade as used by leadworkers?—I am, Sirs, yours truly,

Dec. 11th, 1893. INQUIRENS.

DISINFECTION OF HOUSES AND INFLUENZA.

WE have received from *Mr. Strangman Grubb* of North Common, Ealing, the accounts of four instances in which he has been able to attribute, in his opinion, freedom from spread of influenza to the combustion of carbolic powder.

Dr. F. G. Tooker.—A medical man by conducting a chemist's business would not only incur blame but break the law. While the Pharmacy Act protects all rights of apothecaries, it provides that anyone who shall sell, or keep an open shop for retailing, dispensing, or compounding, poisons, or who shall take, use, or exhibit the name or title of chemist-druggist or chemist or druggist, &c., not being a pharmaceutical chemist, shall for every such offence be liable to a fine of £5. An apothecary's assistant can legalise a medical man's position in taking such a business.

M.D. with his sound titles can afford to dispense with the description Physician and Surgeon; and in the long run the bare letters of his qualification will be more appreciated than the description and questionable titles used by his rivals.

Dr. R. R. Rentoul.—Our correspondent's letter has already appeared in a contemporary.

A METHOD OF DISINFECTING DWELLINGS AFTER THE OCCURRENCE OF INFECTIOUS DISEASE.

To the Editors of THE LANCET.

SIRS,—The disinfection of houses after the occurrence of infectious disease is often a matter of great trouble and inconvenience, as well as a serious expense, and anything which tends to lessen these deserves our consideration. Under present conditions the room itself has to be fumigated with sulphurous acid vapour, the floors and woodwork have to be washed with some disinfecting solution, the walls have to be washed down and repapered, and the bedding has to be sent to some special disinfector or chemical purifier. By the use, however, of formalin (which is really a 40 per cent. solution of formaldehyde in water) in the form both of vapour and spray, the bedding, furniture, and walls can be thoroughly disinfected and rendered perfectly innocuous. The colours of papers, silks, satins, plushes &c. are quite unaffected both by the vapour and the spray, and this adds very materially to its value, while the effect is said to be stronger than that of carbolic acid, sulphurous acid, chlorine, or bromine. For spraying it may be used in the proportion of two, four, or eight drachms to the gallon of water. For the fumigation of mattresses a little of the pure formalin should be placed, say, on a vaporiser under the bed, and to prevent too great diffusion of the vapour the lower part of the bed—i.e., the legs—should be thoroughly covered in with paper. When one side is thoroughly done the mattress should be turned and the fumigation repeated. I may say that I have tried this method and have been satisfied with the results.

I am, Sirs, your obedient servant,

Surbiton, Dec. 12th, 1893. F. P. ATKINSON.

Nemo.—A. B. must be careful to see that the unqualified assistant acts only under strict supervision. All certificates must not only be signed by himself, but the facts that they certify must be work for which he is personally responsible. When living in the same house such supervision is more practicable.

Mr. F. E. Bissell.—Application may be made to Dr. Pocock, The Limes, St. Mark's-road, Kensington.

Mrs. L. Reynolds.—We do not recommend practitioners.

"THE TITLE OF 'DR.'"

To the Editors of THE LANCET.

SIRS,—Your correspondent, "M.D.," says that "None but his *confrères* could appreciate" the suggestion I made in your columns. I submit that one's *confrères* should be consulted; also, I cannot allow that M.D. (R.U.I.) would be in any way an unsuitable inscription for a brass plate, and it would be the whole truth, and not half the truth, as the M.D. alone would. I never even suggested that the degrees your correspondent mentions were not "worth acquiring," or "worthy of consideration," and certainly agree with him "that the assumption should never be expressed." I merely implied that the qualification of the London Conjoint Board was at least their equal. Possibly the reason of "M.D." requiring more energy and time for his degree is that he acquired that qualification last (and so had to recommence his primary work) when he began to see the advantage among the laity of styling himself "Dr." and of adding M.D. alone to his name, as he does; thus—to all appearances—being the equal, in qualification, of a graduate of one of the universities I named. In reply to "M.B. Edin.," I may state that I live in provincial England and cannot agree with him that a man is rated by the number of letters in his title. The value of degrees or qualifications granted north of Cambridge is recognised by all, but what strikes me so forcibly is the very general way in which the holders thereof suppress the name of their university, which, I maintain, is unfair to the London students and also to their *alma mater*, of which they always profess to be so proud, and yet with which they usually so carefully conceal their connexion.

I am, Sirs, yours obediently,

Dec. 13th, 1893. L.R.C.P. LOND., M.R.C.S. ENG., &c.

NE SUTOR!

WE extract the following astounding letter from *The News* of Dec. 1st:—

HOW I CURED GOITRE.

To the Editor of *The News*.

SIR,—What is Goitre? It is a French name, and has been defined as "Tumeur grosse et spongieuse qui vient à la gorge, causée par la mauvaise qualité des eaux. Les montagnards sont sujets aux goitres." ("A large and spongy tumour which comes on the throat, caused by the bad quality of the water. People who live on mountains are subject to goitres.") The definition, in my opinion, is not exact in all its particulars. I do not think it is caused by the water; for the water is best on mountains. Neither do I think that it is because people live on mountains that they are subject to it; for people who never see mountains have it. If I may venture an opinion, it comes from weakness. I believe the cause of swollen tonsils is the same. My reason for saying this, though it is no more than an opinion, is that when we have acted on this principle, and have sought to raise the tone of the system, troubles of this kind have disappeared. I have never known a case of goitre to be cured. I think the instances are rare. The greater interest will therefore attach to the one about which I am going to speak. The person with whom I succeeded is twenty-three years old. She worked at a factory. Her mother asked me to look at her because of some impediment which she had in speaking. This impediment was increasing. I found the goitre added to the difficulty of speaking, and that some way or other it must be removed. The first thing I advised was to stop work at the factory; the second, to go very much into the fresh air; the third, to eat only wholesome food and plenty of it. I advised all this because I conceived weakness to be the cause of the trouble. We were thus operating to remove the cause; but it could have no effect on the goitre so far formed. What was the next step? How shall we reduce the size of the neck and bring about a normal state of things? Very simply. I went frequently, and, standing behind the young person, I forced the tumour down by hard pressure from above. I advised her, whenever she had time, to do the same. In the course of five or six weeks the neck was so reduced that no one could tell that there had been anything the matter with it. But what came of the matter that had formed the tumour? Who shall say? It is very difficult to predicate positively. It seemed to be formed of wasted tissue that ought to have been carried off, and that our performance conduced to this. Anyway, the goitre was cured, and that is the main point. Oh! but what a simple process? Yes, and for this it will probably be despised. It is the old story over again. "If the Prophet had bid thee do some great thing, wouldst thou not have done it?" So we "turn away in a rage." But little things are often all we need do. This I commend to your readers. If they have friends who suffer in this way they may at once set to work patiently and perseveringly to relieve them.—Yours very truly,

Brigstock Vicarage, Nov. 17th, 1893. J. P. SANDLANDS.

Though we are not "turning away in a rage," it is unnecessary to say that we do not join in Mr. Sandlands' hearty commendation of Mr. Sandlands' methods of cure.

Herr D. A. Tischler is advised to obtain a copy of the Local Government Board's model by-laws as to new buildings. These can be obtained at Knight's, Fleet-street.

Inquirer has not enclosed his card.

TREATMENT OF ASTHMA.

To the Editors of THE LANCET.

SIRS,—A patient of mine (aged thirty) who has suffered from asthma from her childhood has been using large quantities of Himrod's asthma cure lately, as it is the only remedy that gives her relief. Would any of your readers be so kind as to inform me whether the daily use of this remedy has any deleterious effect on the heart? Is there any substitute of similar nature that I may try? Stramonium and datura tatula cigarettes seem to aggravate her complaint. I have also tried nitre papers and nitre with iodide of potassium, but without benefit. When on the Pacific coast of North America last year she was recommended to try Kellog's (?) asthma cure by her medical attendant. This remedy, she asserts, gave her even greater relief than Himrod's. Could any of your readers inform me whether they know this remedy, and whether it is to be had in England?—I am, Sirs, yours faithfully,

Liverpool, Dec. 12th, 1893. ASTHMA.

ERRATUM.—Dr. Bateman asks us to correct an error which occurs in connexion with his signature to a letter which appeared in THE LANCET of Dec. 9th, page 1475. The whole signature should read "A. G. Bateman, M.B."

During the week marked copies of the following newspapers have been received:—*South Wales Daily News, Wolverhampton Chronicle, Northern Whig (Belfast), City Press, Manchester Courier, Birmingham Argus, East Anglian Daily Times, Irish Times, Sheffield Telegraph, Le Temps (Paris), Scotsman, Glasgow Herald, Bristol Times and Mirror, Newcastle Evening Chronicle, Scottish Leader, Yorkshire Post, Liverpool Daily Post, Sanitary Record, West Middlesex Standard, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, Hertfordshire Mercury, Reading Mercury, Sunday Times, Times of India, Pioneer Mail, Architect, Builder, The Press (Pretoria, South Africa), Transvaal Advertiser (Pretoria), Diario de Tenerife, Food and Sanitation, Cycle, West Middlesex Advertiser, Surrey Advertiser, Galignani Messenger, Public Opinion, Weekly Dispatch, Cheltenham Examiner, Lynn News, Huddersfield Daily Chronicle, Kerry Evening Star, Keighley News, Lancaster Guardian, Morning Post, Citizen, Dundee Advertiser, Irish News, Scarborough Post, University Correspondent, Leicester Post, &c. &c.*

Communications, Letters &c. have been received from—

A.—Dr. A. McG. Anderson, Dundee; Dr. Lombe Atthill, Dublin; Dr. Ambrose, Dewsbury; Dr. W. S. Alexander, Dublin; Mr. T. Armstrong, London; Messrs. Armour and Co., London; Aberystwyth Corporation, Chairman of; Addison, London.

B.—Dr. J. F. Bullar, Southampton; Mr. Haydn Brown, Guernsey; Mr. W. H. Brown, Leeds; Mr. W. L'Heureux Blenkarne, Leicester; Mr. C. Birchall, Liverpool; Mr. W. F. Brook, Swansea; Mr. A. A. Bowlby, London; Mr. B. G. M. Baskett, London; Messrs. Brooks and Walker, London; Messrs. P. Blakiston and Co., Philadelphia; Messrs. Blondeau et Cie, London; Messrs. Boulton & Paul, Norwich; Brighton and Hove Hospital for Women. Secretary of; *Blackpool Times*, Manager of; Brentford Gas Works, Engineer of; Burnswood Asylum, Lichfield, Medical Superintendent of; Bets, London.

C.—Dr. S. R. Collier, London; Dr. W. J. Cleaver, Sheffield; Mr. H. St. C. Carruthers, Malabar; Mr. S. Crossley, Blackburn; Messrs. Crossley, Moir and Co., London; Messrs. A. H. Cox and Co., Brighton; Messrs. Christy and Co., London; Church of England Sanitary Association, London, Secretary of; Cascara, London.

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L.—Dr. J. F. Little, London; Leeds Hospital for Women and Children, Secretary of; London Press Exchange, Limited, Secretary of.

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V.—Mr. C. Van-Lennep, London.

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X.—X., Kingston.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. J. E. Appleton, The Lizard; Atrypa, London; Appleyard, Manningham.

B.—Dr. Charlton Bastian, London; Dr. G. Buchanan, Glasgow; Dr. J. M. Barbour, London; Mr. T. Bromilow, Flint; Mrs. Bovill, Coulsdon; J. E. Bryant Co., Limited, Toronto; Beta, West Bromwich; Bacchus, London.

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G.—Dr. J. Griffiths, Cambridge; Mr. R. Gascoigne, Liverpool.

H.—Mr. W. T. Hillier, Brighton; Harrogate Borough, Town Clerk of; 32, Hindon-street, Victoria, S.W.

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Z.—Zeta, London.

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